99-SQ-30-0007
REQUEST FOR QUOTATION
COMMERCIAL ITEM

Armature Windings for Generator Units 1, 2, and 3 at Headgate Rock Powerplant

BIA
Arizona

Lower Colorado Regional Office
Boulder City, Nevada
1999

United States Department of the Interior
Bureau of Reclamation

www.lc.usbr.gov/~g3100

99-SQ-30-0007

REPLACEMENT ARMATURE WINDINGS
FOR
HEADGATE ROCK POWERPLANT UNITS 1, 2, AND 3

HEADGATE ROCK HYDROELECTRIC PROJECT, ARIZONA

FOREWORD

Headgate Rock Dam and Powerplant is located 1 mile north of the town of Parker, Arizona, approximately 1 mile west of the main road between the town of Parker and Parker Dam which is 14.4 miles upstream. The three generators to be rewound were damaged by water when the plant was flooded in October of 1998.

The Bureau of Reclamation requires that the successful offeror design, fabricate, furnish, install and test, one complete class “F” stator winding for Generating Unit No. 1 at Headgate Rock Powerplant and install and test two Government-furnished class “F” stator windings in Generating Unit Nos. 2 and 3 at Headgate Rock Powerplant. Also, the successful offeror is required to clean, repair if needed, re-torque, treat stator slots, and paint the existing stator core iron for all three generators.

The existing generators will be disassembled and reassembled by the Government; however, the successful offeror shall remove the existing winding from the stator slots. The Contractor shall be responsible for appropriate disposal of the old stator windings and materials. The existing winding does not contain asbestos.

A site visit is scheduled on July 22, 1999, at 10 a.m. Mountain Standard Time. Participants will meet at the Headgate Rock Powerplant parking area. Those wishing to attend the site visit should contact the Parker Dam Facilities Manager at 760-663-3712.

ACQUISITION OF THE ABOVE WORK WILL BE PURSUANT TO THE FEDERAL ACQUISITION REGULATIONS SUBPART 13.5, TEST PROGRAM FOR CERTAIN COMMERCIAL ITEMS WHICH AUTHORIZES ACQUISITION OF COMMERCIAL ITEMS UP TO $5 MILLION VIA SIMPLIFIED ACQUISITION PROCEDURES.

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SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS

OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30

1. REQUISITION NUMBER	PAGE 4 OF 122 PAGES
99315200006	

2. CONTRACT NO.	3. AWARD/EFFECTIVE DATE	4. ORDER NUMBER	5. SOLICITATION NUMBER	6. SOLICITATION ISSUE DATE
			99-SQ-30-0007	**7/12/99**

7. FOR SOLICITATION INFORMATION CALL:	a. NAME	b. TELEPHONE NUMBER *(No collect calls)*	8. OFFER DUE DATE/ LOCAL TIME
	Beverly K. Nelson (*e-mail:* bnelson@lc.usbr.gov)	**(702) 293-8524**	**8/13/99 @ 3:00 PM**

9. ISSUED BY — CODE LC-3113

Mail to:

Bureau of Reclamation
Lower Colorado Regional Office
P.O. Box 61470
Boulder City NV 89006-1470

Overnight Mail to:

Bureau of Reclamation
Lower Colorado Regional Office
400 Railroad Avenue
Boulder City NV 89005

10. THIS ACQUISITION IS
- [X] UNRESTRICTED
- [ ] SET ASIDE % FOR
  - [ ] SMALL BUSINESS
  - [ ] SMALL DISADV. BUSINESS
  - [ ] 8(a)

SIC: **3621**

SIZE STANDARD: **1,000 employees**

11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED
- [ ] SEE SCHEDULE

12. DISCOUNT TERMS

- [ ] 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)

13b. RATING

14. METHOD OF SOLICITATION
- [X] RFQ [ ] IFB [ ] RFP

15. DELIVER TO — CODE

Davis Dam, Arizona

16. ADMINISTERED BY — CODE **LC-3113**

Bureau of Reclamation
Lower Colorado Regional Office
P.O. Box 61470
Boulder City NV 89006-1470

17a. CONTRACTOR/ OFFEROR — CODE — FACILITY CODE

TELEPHONE NO.

18a. PAYMENT WILL BE MADE BY — CODE **D-7734**

U.S. Department of the Interior
Bureau of Reclamation
Reclamation Service Center
P.O. Box 25508
Denver CO 80225-0508

- [ ] 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER

18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED
- [X] SEE ADDENDUM

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	SEE PARAGRAPH 4. CONTINUATION OF BLOCKS 19 THROUGH 24 *(Attach Additional Sheets as Necessary)*				

25. ACCOUNTING AND APPROPRIATION DATA

26. TOTAL AWARD AMOUNT *(For Govt. Use Only)*

- [X] 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4. FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA [X] ARE [ ] ARE NOT ATTACHED.
- [X] 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA [X] ARE [ ] ARE NOT ATTACHED.

28. [X] CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN 31 COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.

29. [ ] AWARD OF CONTRACT: REFERENCE _____ OFFER DATED _____. YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:

30a. SIGNATURE OF OFFEROR/CONTRACTOR

31a. UNITED STATES OF AMERICA *(SIGNATURE OF CONTRACTING OFFICER)*

30b. NAME AND TITLE OF SIGNER *(TYPE OR PRINT)* — 30c. DATE SIGNED

31b. NAME OF CONTRACTING OFFICER *(TYPE OR PRINT)* — 31c. DATE SIGNED

32a. QUANTITY IN COLUMN 21 HAS BEEN
- [ ] RECEIVED [ ] INSPECTED [ ] ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED

32b. SIGNATURE OF AUTHORIZED GOVT. REPRESENTATIVE — 32c. DATE

41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT

41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER — 41c. DATE

33. SHIP NUMBER — [ ] PARTIAL [ ] FINAL

34. VOUCHER NUMBER

35. AMOUNT VERIFIED CORRECT FOR

36. PAYMENT — [ ] COMPLETE [ ] PARTIAL [ ] FINAL

37. CHECK NUMBER

38. S/R ACCOUNT NUMBER

39. S/R VOUCHER NUMBER

40. PAID BY

42a. RECEIVED BY *(Print)*

42b. RECEIVED AT *(Location)*

42c. DATE REC'D *(YY/MM/DD)*

42d. TOTAL CONTAINERS

CONTINUATION OF BLOCKS FROM SF 1449

1. Block 15: Delivery To

(a) All supplies or equipment required under this contract shall be shipped f.o.b., destination to the following address:

Headgate Rock Dam Powerplant
Parker, Arizona 85344

(b) Deliveries will be accepted between 6:30 a.m. to 3:00 p.m., local time, Monday through Thursday, except Federal holidays. Point of contact for delivery information is Parker Dam Facility Manager, telephone No. 760-663-3712.

2. Block 16: Government Administration Personnel

The contracting office representative responsible for overall administration of this contract is:

Beverly K. Nelson (Mail Code: LC-3113), Contract Specialist
Bureau of Reclamation
P.O. Box 61470
Boulder City, Nevada 89006-1470
Phone No.: (702) 293-8524
Fax No.: (702) 293-8499
E-mail address: bnelson@lc.usbr.gov

3. Block 17a: Contractor's Administration Personnel

Offerors are requested to designate a person who will be in charge of overall administration of this contract.

Name:_____

Title:_____

Address:_____

City/State/Zip:_____

Telephone No:(____) ___ -_____

Fax No.: (___) ___ -_____

E-mail address:_____

4. Block 18b: Submission of Invoices.

(a) The COR has been designated authority to approve invoices for payments under the contract. To ensure timely processing of payments under the contract, the designated billing office for such payments is: Mr. Jack Delp (LC-6000), Bureau of Reclamation,, P.O. Box 61470, Boulder City NV 89006-1470.

(b) Final payment under the contract will be approved by the Contracting Officer. The final invoice will be approved pursuant to the Prompt Payment clause in the contract after all contract settlement actions are complete. To ensure timely processing, the designated billing office for the final invoice is Ms. Beverly Nelson (LC-3113), Bureau of Reclamation, Lower Colorado Region, P.O. Box 61470, Boulder City NV 89006.

5. Blocks 19 Through 24: Schedule of Supplies/Services.

(a) The Requirements.

(1) The Contractor shall furnish the items identified in this Section, in accordance with the terms, conditions, and specifications contained in the contract.

(2) An offeror proposing prices on only one schedule or part of a schedule or schedules will not be considered for award.

(3) Items 13-18 below are estimated quantities and are therefore applicable to the "Variation in Estimated Quantity" clause of this contract.

(b) The Schedule of Supplies/Services.

19. Item No.	20. Schedule of Supplies/Services	21. Quantity	22. Unit	23. Unit Price	24. Amount
1	Removing, preparing for disposal and disposing of the existing winding from generator No. 2	For the lump sum of		----------	$
2	Installing and testing one Government-furnished armature winding in Unit No. 2. Installation shall include all insulation materials, epoxies, slot filler materials, semiconductive treatment (materials), and other miscellaneous materials not furnished by the Government	For the lump sum of		----------	$
3	Removing, preparing for disposal and disposing of the existing winding from generator No. 3	For the lump sum of		----------	$

19. Item No.	20. Schedule of Supplies/Services	21. Quantity	22. Unit	23. Unit Price	24. Amount
4	Installing and testing one Government-furnished armature winding in Unit No. 3. Installation shall include all insulation materials, epoxies, slot filler materials, semiconductive treatment (materials), and other miscellaneous materials not furnished by the Government	For the lump sum of		----------	$
5	Furnishing and factory testing one new armature winding for Unit No. 1.	For the lump sum of		----------	$
6	Removing, preparing for disposal and disposing of the existing winding from generator No. 1	For the lump sum of		----------	$
7	Installing the new winding furnished under item 5, including performing field tests specified under subparagraph 4.03	For the lump sum of		----------	$
8	Furnishing, testing, and installing 84 Resistance Temperature Detectors for generators No. 1, No.2, and No.3	For the lump sum of		----------	$
9	Salvage credit for three armature windings	For the lump sum of		----------	($)
10	Furnishing Drawings and Data	For the lump sum of		----------	$
11	Furnish and factory test 20 coils for use in rewinding units 2 and 3. These coils will be used in the installation phase to replace any coils damaged during installation of the Government-furnished winding.	For the lump sum of		----------	$
12	Furnish and factory test 50 spare coils of each different type for each generator (150 minimum spare coils).	For the lump sum of		----------	$
13	Erecting Engineer onsite during commissioning of first unit; regular time	15 days		----------	$
14	Erecting Engineer onsite during commissioning of first unit; overtime -	7 days		----------	$
15	Erecting Engineer onsite during commissioning of second unit; regular time	15 days		----------	$

19. Item No.	20. Schedule of Supplies/Services	21. Quantity	22. Unit	23. Unit Price	24. Amount
16	Erecting Engineer onsite during commissioning of second unit; overtime	7 days		----------	$
17	Erecting Engineer onsite during commissioning of third unit; regular time	15 days		----------	$
18	Erecting Engineer onsite during commissioning of third unit; overtime time	7 days		----------	$
	Total for Schedule				$

(c) Warranted Characteristics

The offeror warrants that the losses for the generator (Unit 1) after installation of its new armature winding will not exceed the value stated below:

*The armature winding I^2R losses at 4,160 volts, 60 hertz, 0.9 power factor, and 7,222 kilovolt amperes output at 75°C will not exceed _____ kilowatts.

Offerors failing to indicate the above value or offering a warranted value in excess of 94 kilowatts will not be considered for award.

PART II
CONTRACT CLAUSES

1. 52.212-4 Contract Terms and Conditions--Commercial Items (May 1999)

(a) Inspection/Acceptance. The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its postacceptance rights (1) within a reasonable time after the defect was discovered or should have been discovered; and (2) before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) Assignment. The Contractor or its assignee's rights to be paid amounts due as a result of performance of this contract, may be assigned to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C. 3727).

(c) Changes. Changes in the terms and conditions of this contract may be made only by written agreement of the parties.

(d) Disputes. This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR 52.233-1, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.

(e) Definitions. The clause at FAR 52.202-1, Definitions, is incorporated herein by reference.

(f) Excusable Delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(g) Invoice. The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized) to the address designated in the contract to receive invoices. An invoice must include--

(1) Name and address of the Contractor;

(2) Invoice date;

(3) Contract number, contract line item number and, if applicable, the order number;

(4) Description, quantity, unit of measure, unit price and extended price of the items delivered;

(5) Shipping number and date of shipment including the bill of lading number and weight of shipment if shipped on Government bill of lading;

(6) Terms of any prompt payment discount offered;

(7) Name and address of official to whom payment is to be sent; and

(8) Name, title, and phone number of person to be notified in event of defective invoice.

Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) Circular A-125, Prompt Payment. Contractors are encouraged to assign an identification number to each invoice.

(h) Patent Indemnity. The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.

(i) Payment. Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract. The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) Circular A-125, Prompt Payment. If the Government makes payment Electronic Funds Transfer (EFT), see 52.212-5(b) for the appropriate EFT clause. In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

(j) Risk of Loss. Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.

(k) Taxes. The contract price includes all applicable Federal, State, and local taxes and duties.

(l) Termination for the Government's Convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such

termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

(m) Termination for Cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(n) Title. Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.

(o) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(p) Limitation of Liability. Except as otherwise provided by an express or implied warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.

(q) Other Compliances. The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.

(r) Compliance with Laws Unique to Government Contracts. The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C 327, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistle blower protections; 49 U.S.C 40118, Fly American; and 41 U.S.C. 423 relating to procurement integrity.

(s) Order of Precedence. Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order: (1) the schedule of supplies/services; (2) the Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause; (3) the clause at 52.212-5; (4) addenda to this solicitation or contract, including any license agreements for computer software; (5) solicitation provisions if this is a solicitation; (6) other paragraphs of this clause;

(7) the Standard Form 1449; (8) other documents, exhibits, and attachments; and (9) the specification.

2. Addendum to 52.212-4 Contract Terms and Conditions--Commercial Items (May 1999).

(a) Modification to Paragraph (g). Only an original invoice is required to be submitted. Additional copies are not required.

(b) Modification to Paragraph (i). Payment shall be made for the items and services accepted by Government that have been delivered to the destinations and/or performed in accordance with the specifications set forth in this contract. The Government may make payment on a percentage of completion basis.

(c) Modifications to Paragraph (o). The Contractor also warrants the following:

(1) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (9) below, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(2) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(3) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

(i) The Contractor's failure to conform to contract requirements; or

(ii) Any defect of equipment, material, workmanship, or design furnished.

(4) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(5) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(6) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(7) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

(i) Obtain all warranties that would be given in normal commercial practice;

(ii) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(iii) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(8) In the event the Contractor's warranty under paragraph (2) above has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(9) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

(10) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

(d) Additional Applicable Terms and Conditions

(1) 52.252-2 Clauses Incorporated by Reference (Feb 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically via the Internet at http://www.arnet.gov/far.

Federal Acquisition Regulation (48 CFR Chapter 1) Clauses

52.211-5 Material Requirements (Oct 1997)
52.211-13 Time Extensions (Apr 1984)
52.211-18 Variation in Estimated Quantity (Apr 1984)
52.228-5 Insurance - Work on a Government Installation (Jan 1997)
52.232-11 Extras (Apr 1984)
52.236-2 Differing Site Conditions (Apr 1984)
52.236-3 Site Investigation and Conditions Affecting the Work (Apr 1984)
52.236-5 Material and Workmanship (Apr 1984)
52.236-6 Superintendence by the Contractor (Apr 1984)
52.236-7 Permits and Responsibilities (Nov 1991)
52.236-9 Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements (Apr 1984)

52.236-10 Operations and Storage Areas (Apr 1984)
52.236-11 Use and Possession Prior to Completion (Apr 1984)
52.236-12 Cleaning up (Apr 1984)
52.236-13 Accident Prevention (Nov 1991)
52.242-14 Suspension of Work (Apr 1984)
52.242-15 Stop Work Order (Aug 1989)
52.242-17 Government Delay of Work (Apr 1984)
52.245-4 Government-furnished Property (Short Form) (Apr 1984)
52.247-34 F.O.B. Destination (Nov 1991)

(2) 52.211-8 Time of Delivery (Jun 1997)

(a) Completion of the work on Generating Unit No. 2 in the earliest amount of time possible is of the utmost importance to the Government. Because of this, the Government intends to include the Proposed Completion Schedule of Generating Unit No. 2 as an evaluation factor for award.

(b) The Government desires completion of the following work to be made according to the following schedule:

DESIRED COMPLETION SCHEDULE	
Generating Unit No.	Date Desired
2	No later than 12/1/1999
3	No later than 3/1/2000
1	No later than 5/1/2000

(c) If the offeror is unable to meet the Desired Completion Schedule, it must at least meet the following Required Completion Schedule in order to be considered for award. Those offeror's proposing a completion schedule in excess of the Required Completion Schedule will be considered unacceptable an ineligible for award.

REQUIRED COMPLETION SCHEDULE	
Generating Unit No.	Maximum Date Required
2	No later than 1/31/2000
3	No later than 3/1/2000
1	No later than 5/1/2000

(d) If the offeror is unable to meet the desired completion schedule, it may propose an alternate completion schedule in the table provided below. However, the offeror's proposed completion schedule shall not extend the completion time beyond the dates specified in the Required Completion Schedule:

PROPOSED COMPLETION SCHEDULE	
Generating Unit No.	Date Proposed
2	
3	
1	

NOTE: Offerors are to place a date, not a specific number of days, in the column titled "Date Proposed." Additionally, do not condition your proposed schedule, e.g. specific date of award, approval of drawings, etc. This may result in your proposal being unacceptable and therefore ineligible for award.

(e) Offers failing to include the "Proposed Completion Schedule" with their proposals will not be considered for award.

(f) Offers will be evaluated as outlined in the provision entitled "Evaluation -- Commercial Items.

(3) Performance Period for Erecting Engineer Services

The contract requires the services of an Erecting Engineer onsite during the commissioning of each of the units. It is unknown at this time when the commissioning of the units will occur. It is anticipated that the commissioning will take place shortly after completion of the work on each unit (see Time of Delivery clause above). The Contractor will be notified 14 calendar days prior to commencement of the commissioning of the date the Erecting Engineer is required to be onsite.

The following is an estimated performance period for the commissioning:

ESTIMATED COMMISSIONING SCHEDULE		
Generating Unit No.	Regular Time Days	Overtime Days
2	15	7
3	15	7
1	15	7

(4) WBR 1452.236-81 Services of Erecting Engineers -- Bureau of Reclamation (Jul 1993)

(a) Requirement. The Contracting Officer may direct the Contractor to furnish one or more competent erecting engineers.

(b) Responsibility.

(1) Erecting engineers shall:

(i) Be fluent in speaking the English language;

(ii) Supervise and be responsible for erecting, starting, and operating the equipment until field tests are completed and supervise commissioning/ testing.

(iii) Fully cooperate with the erection contractor performing under other contracts; and

(iv) Coordinate work and operations with the program office and the Contracting Officer or authorized representative in charge of the erection.

(2) Erecting engineers shall not be responsible for defects in installation of the equipment due to refusal or failure of the erection contractor to follow reasonable instructions of the erecting engineer.

(c) Payment.

(1) Regular Hours. Payments made to the contractor for erecting engineer services shall:

(i) Be made at the rate offered in the Schedule of Supplies/Services per calendar day (including Saturdays, Sundays, and national legal holidays);

(ii) Be permitted if normal erection supervision is performed concurrently with the making of corrections for contractor errors.

(iii) Be made at the daily rate for a 40-hour workweek covering a 7-day period beginning with the erecting engineer's first working date at the site;

(iv) Cover services at the site of erection up to and including 40 hours per week, regardless of the hours worked per day or the days during which such services are performed;

(v) Include all costs for travel and per diem while the Contractor is at the site;

(vi) Not include travel time to and from the job site; and

(vii) Not be made for any period of 1 or more full calendar days which the erecting engineer spent correcting contractor errors (such corrections are the responsibility of the contractor and for payment purposes shall be deducted from the total time the erecting engineer is at the construction site).

(2) Overtime Hours. Payments made to the contractor for the overtime services of an erecting engineer shall:

(i) Be permitted only if in excess of 40 hours during a workweek as defined in subparagraph (c)(1)(iii) above;

(ii) Only be allowable if ordered by the Contracting Officer or authorized representative;

(iii) Only be paid at the overtime rate per hour offered in the Schedule of Supplies/Services for each erecting engineer; and

(iv) Be the same for all days, including Saturdays, Sundays, and national legal holidays.

(5) Acceleration of Work

Reclamation at its sole option, reserves the right to direct the Contractor to expedite the installation and testing work. The additional cost to the Contractor for expediting this work will be negotiated either prior to directly after the direction for expediting the work is given.

(6) 52.211-11 Liquidated Damages--Supplies, Services, or Research and Development (Apr 1984)

(a) If the Contractor fails to deliver the supplies or perform the services within the time specified in this contract, or any extension, the Contractor shall, in place of actual damages, pay to the Government as fixed, agreed, and liquidated damages, for each calendar day of delay the sum of $2,500.

Provided, that the maximum total liability for liquidated damages for the delay shall not exceed $200,000.

(b) Alternatively, if delivery or performance is so delayed, the Government may terminate this contract in whole or in part under the Termination for Cause paragraph of the Contract Terms and Conditions--Commercial Items clause in this contract and in that event, the Contractor shall be liable for fixed, agreed, and liquidated damages accruing until the time the Government may reasonably obtain delivery or performance of similar supplies or services. The liquidated damages shall be in addition to excess costs under the Termination clause.

(c) The Contractor shall not be charged with liquidated damages when the delay in delivery or performance arises out of causes beyond the control and without the fault or negligence of the Contractor as defined in the Excusable Delays paragraph of the Contract Terms and Conditions–Commercial Items clause in this contract.

(7) 1452.228-70 Liability Insurance--Department of the Interior (Jul 1996)

(a) The Contractor shall procure and maintain during the term of this contract and any extension thereof liability insurance in form satisfactory to the Contracting Officer by an insurance company which is acceptable to the Contracting Officer. The named insured parties under the policy shall be the Contractor and the United States of America. The amounts of the insurance shall be not less than as follows:

WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY

$100,000

GENERAL LIABILITY

$500,000 per occurrence

AUTOMOBILE LIABILITY

$200,000 each person
$500,000 each occurrence
$ 20,000 property damage

(b) Each policy shall have a certificate evidencing the insurance coverage. The insurance company shall provide an endorsement to notify the Contracting Officer 30 days prior to the effective date of cancellation or termination of the policy or certificate; or modification of the policy or certificate which may adversely affect the interest of the Government in such insurance. The certificate shall identify the contract number, the name and address of the Contracting Officer, as well as the insured, the policy number and a brief description of contract services to be performed. The Contractor shall furnish the Contracting Officer with a copy of an acceptable insurance certificate prior to beginning the work.

(8) WBR 1452.201-80 Authorities and Limitations--Bureau of Reclamation (Jul 1993)

(a) All work shall be performed under the authority exercised by the Contracting Officer who has been appointed in accordance with the requirements of the Department of the Interior Acquisition Regulation (DIAR) 1401.603 (48 CFR 1401.603).

(b) The Contracting Officer may designate other Government employees to act as authorized representatives in administering this contract in accordance with the requirements of DIAR 1401.670 (48 CFR 1401.670). Any designation shall be made to the authorized representative by an appointment memorandum signed

by the Contracting Officer which contains the scope and limitations of authority delegated for purposes of administering this contract. A copy of the memorandum, and any revisions to it, shall be provided to the Contractor which shall acknowledge receipt.

(c) The Contractor shall, without unnecessary delay, comply with any written or oral direction of the Contracting Officer or authorized representative(s) acting within the scope and authority of their appointment memorandum. Such orders or direction include, but are not limited to, instructions, interpretations, approvals, or rejections associated with work under this contract including requirements for submission of technical data, shop drawings, samples, literature, plans, or other data required to be approved by the Government under this contract.

(d) (1) If the Contractor receives direction for work under this contract (including any written or oral orders it regards as a change order under the Changes clause of this contract) and it considers such direction to have been issued without proper authority (including instances where it believes delegated authority has been exceeded), it shall not proceed with the direction and shall notify the Contracting Officer within five (5) working days of receipt of the direction. On the basis of the most accurate information available to the Contractor, the notice shall state--

(i) The date, nature, and circumstances of the direction received;

(ii) The name, function, and activity of each Government individual and Contractor official or employee involved in or knowledgeable about such direction;

(iii) The identification of any documents and the substance of any oral communication involved in such direction;

(iv) The contract line items or other contract requirements that may be affected by the alleged direction including any suspected delays or disruption of performance; and

(v) Any other information considered pertinent.

(2) Unless otherwise provided in this contract, the Contractor assumes all costs, risks, liabilities, and consequences of performing any work it is directed to perform under this paragraph prior to receipt of the Contracting Officer's determination issued under paragraph (e) of this clause.

(e) The Contracting Officer shall promptly, after receipt of any notice made under paragraph (d) of this clause, respond to the notice in writing. The response shall--

(1) Confirm that the direction contained in the Contractor's notice was unauthorized and either authorize it by appropriate contract modification or countermand it;

(2) Deny that the direction contained in the Contractor's notice was outside the scope and limitations of the authority of the authorized representative who gave the direction and direct the Contractor to proceed immediately with the direction received or, when necessary, direct the mode of further performance; or

(3) In the event the information contained in the Contractor's notice is inadequate to make a decision under subparagraphs (e)(1) or (2) of this clause, advise the Contractor what additional information is required, and establish the date by which it should be furnished and the date thereafter by which the Government will respond.

(f) A failure of the parties to agree upon the nature of a direction, or upon the contract action to be taken with respect thereto, shall be subject to the provisions of the Disputes clause of this contract.

(9) WBR 1452.242-80 Postaward Conference -- Bureau of Reclamation (Jul 1993)

(a) Prior to the Contractor starting work, a postaward conference (as described in FAR Subpart 42.5), will be convened by the contracting activity or contract administration office. The Contractor's Project Manager shall attend the conference. If the contract involves subcontractors, a representative of each major subcontractor is also required to attend.

(b) The conference will be held at Parker Dam Powerplant, California.

(c) The Contracting Officer and the Contractor will agree to the date and time of the conference after award of the contract. In event of a conflict in schedules, the Contracting Officer shall establish the date for the conference.

(d) The Contractor shall include any associated costs for attendance at the conference in its offer.

(10) WBR 1452.223-81 Safety and Health -- Bureau of Reclamation (Jul 1998)

(a) The Contractor shall not require any laborer or mechanic employed in the performance of this contract (including subcontracts) to work under conditions which are unsanitary, hazardous, or dangerous to the employee's health or safety.

(b) In addition to the requirements of the Accident Prevention clause of this contract, the Contractor shall comply with the Bureau of Reclamation "Reclamation Safety and Health Standards" (RSHS) manual.

(c) (1) The safety and health standards as referenced in subparagraph (b)(2) of the Accident Prevention clause may be obtained from any regional or area office of the Occupational Safety and Health Administration, U.S. Department of Labor.

(2) The RSHS manual as referenced in subparagraph (b) above can be ordered from: The Government Printing Office, Superintendent of Documents, North Capitol and H St. N.W., MS-SSMC - Room 566, Washington, D.C. 20401 (Stock item GPO-024-003-00178-3). The Contractor may also obtain the RSHS manual from the Lower Colorado Regional Contracting Office for $29 each.

(d) The Contractor shall submit a written proposed safety program in the form and time intervals prescribed in section 2 of the RSHS manual and amendments or revisions thereto in effect on the date of the solicitation.

(e) In addition to any other provisions in the contract, the Contractor shall comply with all safety and material data submittal requirements contained in the RSHS manual and revisions thereto.

(f) The Contractor shall maintain an accurate record of, and shall report to the Contracting Officer (or authorized representative) in the manner prescribed by the Contracting Officer, all cases of death, occupational diseases, or traumatic injury to employees or the public involved, and property damage in excess of $2,500 occurring during performance of work under this contract.

(g) The rights and remedies of the Government provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

(h) In the event there is a conflict between the requirements contained in any of the safety documents referenced herein, the more stringent requirements shall prevail.

(11) WBR 1452.246-81 Failure to Meet Performance Warranties -- Bureau of Reclamation (Sep 1995) Alternate I (Sep 1995)

(a) In addition to any other warranties in this contract, this clause is applicable when end items furnished by the Contractor do not meet Reclamation-conducted performance warranties listed in the Supplies or Services and Prices section of the Schedule. Reclamation will conduct factory tests, field tests, or operations under service conditions as specified in this contract in accordance with Parts 1 through 6, Statement of Work, and the Schedule.

(b) The Contracting Officer will notify the Contractor, within a reasonable time after discovery that the item does not meet warranty requirements under the "Warranty Characteristics" paragraph in the Supplies or Services and Prices section of the Schedule. The Contractor will be given an opportunity to repair or replace defective equipment at the Contractor's expense.

(c) If the contractor does not repair or replace defective equipment, the Government may elect to accept equipment which does not pass factory test, field test, or operation under service conditions, and which does not meet the requirements of performance warranties, and the Government shall be entitled to

an equitable reduction in the contract price for such equipment. Because of the impossibility of determining the actual loss to the Government due to such failure to meet warranties, the Government will adjust the contract price in accordance with the liquid damages in paragraph (d). All adjustments made in accordance with paragraph (d) of this clause shall be cumulative with no credit given for equipment which exceeds performance warranties. If the adjustments result in a reduction in the contract price which exceeds the amount due the Contractor, the Contractor shall promptly refund to the Government the excess amount and the Contractor and the its sureties shall be liable for that amount. This Adjustment shall be final and conclusive for both the Contractor and the Government, and neither party can use this adjustment as a basis for a claim against the other party.

(d) (1) The contract line item price for each generator armature winding shall be reduced $2,000 for each kilowatt that the actual armature winding I^2R losses, as determined from field tests performed by the Contractor in accordance with the specification paragraph entitled "Field Tests" (rather than any previous tests performed by the Government), exceed the warranted losses at 4,160 volts, rated frequency, rated power factor, and rated kilovolt-ampere output.

(2) The contract line item price for each generator armature winding shall be further reduced by $2,000 for each 1/100 of 1 percent that the actual kilowatt capacity is below the required capacity specified under the "Rating" subparagraph of the specification paragraph entitled "Type and Rating," and within the specified temperature limits.

(12) 52.223-3 Hazardous Material Identification and Material Safety Data (Jan 1997) Alternate I (Jul 1995)

(a) "Hazardous material" as used in this clause, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract.)

(b) The offeror must list any hazardous material, as defined in paragraph (a) of this clause, to be delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number of Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this contract.

MATERIAL (If none, insert "None")	IDENTIFICATION NO.

(c) This list must be updated during performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.

(d) The apparently successful offeror agrees to submit, for each item as required prior to award, a Material Safety Data Sheet, meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in paragraph (b) of this clause. Data shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful offeror is the actual manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful offeror being considered nonresponsible and ineligible for award.

(e) If, after award, there is a change in the composition of the item(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under paragraph (d) of this clause, the Contractor shall promptly notify the Contracting Officer and resubmit the data.

(f) Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.

(g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(h) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:

(1) To use, duplicate and disclose any data to which this clause is applicable. The purposes of this right are to--

(i) Apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials;

(ii) Obtain medical treatment for those affected by the material; and

(iii) Have others use, duplicate, and disclose the data for the Government for these purposes.

(2) To use, duplicate, and disclose data furnished under this clause, in accordance with subparagraph (h)(1) of this clause, in precedence over any other clause of this contract providing for rights in data.

(3) The Government is not precluded from using similar or identical data acquired from other sources.

(i) Except as provided in paragraph (i)(2), the Contractor shall prepare and submit a sufficient number of Material Safety Data Sheets (MSDS's), meeting the

requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous materials identified in paragraph (b) of this clause.

(1) For items shipped to consignees, the Contractor shall include a copy of the MSDS's with the packing list or other suitable shipping document which accompanies each shipment. Alternatively, the Contractor is permitted to transmit MSDS's to consignees in advance of receipt of shipments by consignees, if authorized in writing by the Contracting Officer.

(2) For items shipped to consignees identified by mailing address as agency depots, distribution centers or customer supply centers, the Contractor shall provide one copy of the MSDS's in or on each shipping container. If affixed to the outside of each container, the MSDS's must be placed in a weather resistant envelope.

(13) WBR 1452.247-900 Preparation for Shipment and Handling -- Bureau of Reclamation-Lower Colorado Region (Nov 1996)

(a) The Contractor shall prepare all materials and articles for shipment in such a manner as to protect them from damage, and shall be responsible for and make good any and all damage due to improper preparation or loading for shipment.

(b) Heavy or bulky parts or equipment shall be provided with eye bolts, lugs, or other lifting devices to facilitate handling with a crane, and, if necessary, shall be mounted on skids or crated. Where parts are boxed or crated and it is unsafe to attach slings to the box or crate, slings shall be attached to the parts and the slings shall project through the box or crate so that attachment can be readily made. Instructions for handling and lifting all parts, boxes, and crates shall be clearly painted on or attached to the part or crate. Any articles or materials that otherwise might be lost shall be boxed or bundled and plainly marked for identification. All finished ferrous surfaces shall be coated with a rust preventative compound, and all finished nonferrous metalwork and devices subject to damage shall be suitably wrapped or otherwise protected from damage during shipment.

(c) Spare parts shall be separately packaged and identified. The expiration dates on limited shelf-life items shall be clearly marked for later inventory control by the Bureau of Reclamation.

Spare parts shall be packed in moisture-tight containers or covered with moisture tight wrapping and shall be prepared for extended storage at the Bureau of Indian Affairs' (BIA) warehouse located in Parker, Arizona. Proper precautions shall be taken with all sensitive devices to prevent damage during shipment.

(d) All hazardous materials shipped to the site shall be plainly identified as such on the containers along with a label stating the contents, storage requirements, handling requirements, and first-aid treatment.

(14) WBR 1452.223-80 Asbestos-free Warranty -- Bureau of Reclamation (Oct 1992)

(a) The Contractor warrants that all items delivered, or work required by the contract shall be free of asbestos in any form whatsoever except for the use of asbestos cement pipe.

(b) The Contractor may request the Contracting Officer to approve an exception to this prohibition when an asbestos-free product is not available. Such requests shall be fully documented and submitted as soon as possible after the Contractor determines that an asbestos-free product is not available. Contracting Officer disapproval of a request for an exception shall be final and not subject to the Disputes clause of this contract.

(15) 1452.204-70 Release of Claims--Department of the Interior (Jul 1996)

After completion of work and prior to final payment, the Contractor shall furnish the Contracting Officer with a release of claims against the United States relating to this contract. The Release of Claims form (DI-137) shall be used for this purpose. The form provides for exception of specified claims from operation of the release.

(16) 52.246-18 Warranty of Supplies of a Complex Nature (Apr 1984)

(a) Definitions. "Acceptance," as used in this clause, means the act of an authorized representative of the Government by which the Government assumes for itself, or as an agent of another, ownership of existing and identified supplies, or approves specific services rendered, as partial or complete performance of the contract.

"Correction," as used in this clause, means the elimination of a defect.

"Supplies," as used in this clause means the end items furnished by the Contractor and related services required under this contract. The word does not include "data."

(b) Contractor's obligations. (1) The Contractor warrants that for a period of 5 years the armature windings furnished for Generator Unit No. 1, and reconditioned exciter after acceptance by the Government will be free from defects in material and workmanship and will conform with all requirements of this contract; provided, however, that with respect to Government-furnished property, the Contractor's warranty shall extend only to its proper installation, unless the Contractor performs some modification or other work on the property, in which case the Contractor's warranty shall extend to the modification or other work.

(2) Any supplies or parts thereof corrected or furnished in replacement shall be subject to the conditions of this clause to the same extent as supplies initially delivered. This warranty shall be equal in duration to that set forth in paragraph (b)(1) of this clause and shall run from the date of delivery of the corrected or replaced supplies.

(3) The Contractor shall not be obligated to correct or replace supplies if the facilities, tooling, drawings, or other equipment or supplies necessary to accomplish the correction or replacement have been made unavailable to the Contractor by action of the Government. In the event that correction or replacement has been directed, the Contractor shall promptly notify the Contracting Officer, in writing, of the nonavailability.

(4) The Contractor shall also prepare and furnish to the Government data and reports applicable to any correction required (including revision and updating of all affected data called for under this contract) at no increase in the contract price.

(5) When supplies are returned to the Contractor, the Contractor shall bear the transportation costs from the place of delivery specified in the contract (irrespective of the f.o.b. point or the point of acceptance) to the Contractor's plant and return.

(6) All implied warranties of merchantability and "fitness for a particular purpose" are excluded from any obligation contained in this contract.

(c) Remedies available to the Government. (1) In the event of a breach of the Contractor's warranty in paragraph (b)(1) of this clause, the Government may, at no increase in contract price--

(i) Require the Contractor, at the place of delivery specified in the contract (irrespective of the f.o.b. point or the point of acceptance) or at the Contractor's plant, to repair or replace, at the Contractor's election, defective or nonconforming supplies; or

(ii) Require the Contractor to furnish at the Contractor's plant the materials or parts and installation instructions required to successfully accomplish the correction.

(2) If the Contracting Officer does not require correction or replacement of defective or nonconforming supplies or the Contractor is not obligated to correct or replace under paragraph (b)(3) of this clause, the Government shall be entitled to an equitable reduction in the contract price.

(3) The Contracting Officer shall notify the Contractor in writing of any breach of the warranty in paragraph (b) of this clause within 30 days after discovery of the defect. The Contractor shall submit to the Contracting Officer a written recommendation within 30 days as to the corrective action required to remedy the breach. After the notice of breach, but not later than 30 days after receipt of the Contractor's recommendation for corrective action, the Contracting Officer may, in writing, direct correction or replacement as in paragraph (c)(1) of this clause, and the Contractor shall, notwithstanding any disagreement regarding the existence of a breach of warranty, comply with this direction. If

it is later determined that the Contractor did not breach the warranty in paragraph (b)(1) of this clause, the contract price will be equitably adjusted.

(4) If supplies are corrected or replaced, the period for notification of a breach of the Contractor's warranty in paragraph (c)(3) of this clause shall be 30 days from the furnishing or return by the Contractor to the Government of the corrected or replaced supplies or parts thereof, or, if correction or replacement is effected by the Contractor at a Government or other activity, for 30 days thereafter.

(5) The rights and remedies of the Government provided in this clause are in addition to and do not limit any rights afforded to the Government by any other clause of the contract.

(17) 52.246-21 Warranty of Construction (Mar 1994)

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (i) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

(j) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

3. 52.212-5 Contract Terms and Conditions Required to Implement Statutes or Executive Orders -- Commercial Items (May 1999)

(a) The Contractor agrees to comply with the following FAR clauses, which are incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

(1) 52.222-3, Convict Labor (E.O. 11755); and
(2) 52.233-3, Protest After Award (31 U.S.C 3553).

(b) The Contractor agrees to comply with the FAR clauses in this paragraph (b) which the contracting officer has indicated as being incorporated in this contract by reference to implement provisions of law or executive orders applicable to acquisitions of commercial items or components:

(Contracting Officer shall check as appropriate.)

__√__ (1) 52.203-6, Restrictions on Subcontractor Sales to the Government, with Alternate I (41 U.S.C. 253g and 10 U.S.C. 2402).
____ (2) 52.219-3, Notice of Total HUBZone Small Business Set-Aside (Jan 1999)
____ (3) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (Jan 1999) (if the offeror elects to waive the preference, it shall so indicate in its offer).

____ (4)(i) 52.219-5, Very Small Business Set-Aside (Mar 1999) (Pub. L. 103-403, section 304, Small Business Reauthorization and Amendments Act of 1994).
____ (ii) Alternate I to 52.219-5.
____ (iii) Alternate III to 52.219-5.
__√__ (5) 52.219-8, Utilization of Small Business Concerns (15 U.S.C. 637 (d) (2) and (3));
__√__ (6) 52.219-9, Small Business Subcontracting Plan (15 U.S.C. 637 (d)(4));
____ (7) 52.219-14, Limitations on Subcontracting (15 U.S.C. 637(a)(14)).
__√__ (8)(i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).
____ (ii) Alternate I of 52.219-23.
____ (9) 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
____ (10) 52.219-26, Small Disadvantaged Business Participation Program--Incentive Subcontracting (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
__√__ (11) 52.222-21, Prohibition of Segregated Facilities (Feb 1999).
__√__ (12) 52.222-26, Equal Opportunity (E.O. 11246).
__√__ (13) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C. 4212).
__√__ (14) 52.222-36, Affirmative Action for Workers With Disabilities (29 U.S.C. 793).
__√__ (15) 52.222-37, Employment Reports on Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C. 4212).
____ (16) 52.225-3, Buy American Act--Supplies (41 U.S.C. 10).
__√__ (17) 52.225-9, Buy American Act--Trade Agreements Act--Balance of Payments Program (41 U.S.C. 10, 19 U.S.C. 2501-2582).
____ (18) [Reserved]
____ (19) 52.225-18, European Union Sanction for End Products (E.O. 12849).
____ (20) 52.225-19, European Union Sanction for Services (E.O. 12849).
____ (21)(i) 52.225-21, Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Program (41 U.S.C. 10, Pub. L. 103-87).
____ (21)(ii) Alternate I of 52.225-21.
____ (22) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (31 U.S.C. 3332).
__√__ (23) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (31 U.S.C. 3332).
____ (24) 52.232-36, Payment by Third Party (31 U.S.C. 3332).
____ (25) 52.239-1, Privacy or Security Safeguards (5 U.S.C. 552a).
__√__ (26) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (46 U.S.C. 1241).

(c) The Contractor agrees to comply with the FAR clauses in this paragraph (c), applicable to commercial services, which the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or executive orders applicable to acquisitions of commercial items or components:

(Contracting Officer check as appropriate.)

____ (1) 52.222-41, Service Contract Act of 1965, As amended (41 U.S.C. 351, et seq.).

____ (2) 52.222-42, Statement of Equivalent Rates for Federal Hires (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).
____ (3) 52.222-43, Fair Labor Standards Act and Service Contract Act--Price Adjustment (Multiple Year and Option Contracts) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).
____ (4) 52.222-44, Fair Labor Standards Act and Service Contract Act--Price Adjustment (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).
____ (5) 52.222-47, SCA Minimum Wages and Fringe Benefits Applicable to Successor Contract Pursuant to Predecessor Contractor Collective Bargaining Agreement (CBA) (41 U.S.C. 351, et seq.).

(d) Comptroller General Examination of Record. The Contractor agrees to comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records--Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c) or (d) of this clause, the Contractor is not required to include any FAR clause, other than those listed below (and as may be required by an addenda to this paragraph to establish the reasonableness of prices under Part 15), in a subcontract for commercial items or commercial components--

(1) 52.222-26, Equal Opportunity (E.O. 11246);

(2) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C. 4212);

(3) 52.222-36, Affirmative Action for Handicapped Workers With Disabilities (29 U.S.C. 793); and

(4) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (46 U.S.C. 1241) (flow down not required for subcontracts awarded beginning May 1, 1996).

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PART III
STATEMENT OF WORK

PART 1 - GENERAL REQUIREMENTS

1.01 The Requirement

a. General. - The Contractor shall design, fabricate, furnish, install and test, one complete class “F” stator winding for unit 1 at Headgate Rock Powerplant and shall install and test two Government-furnished class “F” stator windings in units 2 and 3 at Headgate Rock Powerplant, in accordance with the requirements of these specifications. Also, the Contractor shall clean, repair if needed, re-torque, treat stator slots, and paint the existing stator core iron for all three generators. The contractor shall furnish all manufacturing, materials, equipment, machinery, tools, supplies, labor, supervision, transportation, and perform all work necessary to complete the job. The materials shall include, but not be limited to, individual stator coils, coil supports, slot packing materials (including wedges), epoxies, paint, brazing equipment and resistance temperature detectors.

The existing generators will be disassembled and reassembled by the Government; however, the Contractor shall remove the existing winding from the stator slots. The Contractor shall be responsible for appropriate disposal of the old stator windings and materials. The existing winding does not contain asbestos.

1.02 General Description And Operating Conditions of Powerplant

a. General. - Headgate Rock Dam was completed in 1941. It was constructed to raise the water level of the Colorado River to provide permanent gravity-flow diversion facilities for irrigation of Indian land on the Arizona side of the reservoir. Headgate Rock Powerplant was built in 1992 immediately downstream of spillway gates numbers 8, 9, and 10. The powerplant is of the outdoor-surface type and is located at an elevation of approximately 330 feet.

The existing generators have a nameplate rating of 7,222 kilovolt amperes, at 4,160 volts, 0.9 power factor, and 60 hertz.

The generators were manufactured by Villares inc. of Brazil and installed by Voith Hydro in 1992.

In October of 1998, Headgate Rock Powerplant was flooded to the top of the generator housings after a failure of a flange in the area of the bulb turbine. The generators were under water for several weeks. Attempts to dry out the windings in these units proved unsuccessful. The Government has on site two spare armature windings and enough installation materials (tapes, wedges and slot filler materials but no epoxies or varnishes) for installing one winding.

1.03 Submittal Requirements

The Contractor shall make timely submittals to the Government in accordance with this paragraph, Table 1.03-1 (List of Submittals), and all other requirements in the provisions of FAR (Federal Acquisitions Regulations) clauses, and paragraphs of these specifications.

The word "submittals" shall be interpreted to include drawings, data, manuals, certifications, test reports, curves, samples, brochures, and other items furnished by the Contractor for approval, information, or other purposes.

The time required for review of each submittal or resubmittal furnished under an RSN for approval will not begin until the Government receives complete sets of all the submittal materials required for that particular RSN, if necessary for informational continuity. The number of calendar days required for review of drawings or data submitted or resubmitted for approval will include the date the drawings or data are received by the Government, and will extend through the date of return mailing to the Contractor. Except as otherwise provided in these specifications, the Government will require 40 calendar days for review of each submittal or resubmittal furnished by the Contractor for approval. This review time will apply to each separate submittal or resubmittal whether the submittals are approved, not approved, or otherwise returned for revision.

If the Government uses time in excess of the specified number of calendar days for review of any submittal or resubmittal, additional time, not to exceed the excess time, will be added to the time allowed the Contractor for delivery of the materials or equipment affected by such excess time, to the extent it is demonstrated that the excess time caused delay. If the Government's review of two or more separate submittals or resubmittals is late and results in concurrent days of excess time, such days will be counted only once in computing an extension of the delivery date. Further, if the Contractor fails to make complete approval submittals in the sequence and within the time periods specified in this specifications, and thus precludes the Government from approving or considering for approval such submittals within the specified calendar day period, then the Contractor shall not be entitled to an extension of time allowed for delivery of the materials or completion of work.

One set of the submittals required for approval will be returned to the Contractor either approved, not approved, or approved with comments, and will be marked to indicate changes if required. Submittals which are not approved or which require changes or revisions, shall be revised and resubmitted for approval, and shall show changes and revisions with revision date. All requirements specified for the initial submittal shall apply to any resubmittals required. All submittals which are to be resubmitted shall be resubmitted by the Contractor within 40 calendar days after the Contractor has received the Government's review comments.

Table 1.03-1 (List of Submittals) lists the submittals required by these specifications except those submittals which are required conditionally, required by entities other than the Federal Government, or which are periodic in nature. Any submittal required to be submitted by the Contractor, which is not listed in the table, shall be submitted in accordance with the applicable requirements elsewhere in these specifications. In case of a conflict between the requirements of this paragraph and the requirements included elsewhere in these

specifications, the requirements elsewhere shall take precedence over the requirements contained in this paragraph.

Each item in table 1.03-1 (List of Submittals) has been assigned an RSN (Required Submittal Number). The "Submittals required" column of the table specifies the material to be submitted for each RSN. All of the submittal items specified for an RSN will be considered a complete set.

Where the submittals required for an RSN are specified as separate or distinguishable parts, a complete set shall include all parts. Only complete sets shall be submitted whenever possible. As an option, the Contractor may submit materials required for more than one RSN with the same submittal cover letter, provided that they are required by the same responsible code.

The Contractor's submittal cover letter shall include:

1. Reference to the Government contract/specifications number.

2. Identification of responsible code for each RSN as listed in Table 1.03-1 (List of Submittals).

3. Complete list of RSN(s) for which material is being submitted.

4. List of materials being submitted for each RSN.

5. Identification of the submittal as an original submittal or resubmittal.

The number of complete sets to be submitted, and the location to which they are to be sent, shall be in accordance with the "No. of sets to be sent to:" column of the table, except as provided below for sets of original material.

When an RSN involves submittal of original (non-copied) material, all original material, or as much thereof as is necessary to form a complete set, shall be included in just one complete set. This "originals" set shall be sent to the proper address as determined by the "Responsible code" column of the table and the following:

1. CO indicates Contracting Officer.

2. RE indicates Regional Engineer.

3. TSC indicates Denver Office

The "originals" set shall be counted as one of the complete sets required to be submitted under the "No. of sets to be sent to:" column of the table.

Each drawing submitted by the Contractor shall have the Contractor's or supplier's title and drawing number on it. The drawings and data shall be labeled with the Government's contract/specifications numbers and the bidding schedule item number.

Manufacturer's data for commercial products or equipment, such as catalog cut sheets, shall be clearly marked to indicate the item(s) to be furnished. The data shall be sufficiently comprehensive to identify the manufacturer's name, product or equipment type, model, size, and characteristics. They shall completely demonstrate that the product or equipment meets the requirements of these specifications. Submittals requiring certification by registered professionals shall be signed and sealed.

The Contractor shall send the submittals to the applicable addresses listed below as required by table 1.03-1 (List of Submittals).

The Contractor shall also send a copy of the transmittal letter to each of the addresses listed below that are not receiving the complete submittal for a specific RSN.

Submittals shall be sent as required by table 1.03-1 (List of Submittals) to:

1. Contracting Officer, Attention: LC-3113, Bureau of Reclamation, P.O. Box 61470, Boulder City NV 89006-1470

2. Regional Engineer, Attention: LC-6000, Bureau of Reclamation, P.O. Box 61470, Boulder City NV 89006-1470

3. Denver Office, mail to: Bureau of Reclamation, Attention D-8160, PO Box 25007, Denver, Colorado 80225-0007

Table 1.03-1 - List of submittals

RSN	Item	Reference provision, clause, or paragraph	Respon-sible code	Submittal items	No. of sets to be sent to:*			Due date or delivery time
					C0	RE	TSC	
C1	Hazardous Material	1.04.c.	CE	Material Safety Data Sheets	1	2	0	Prior to bring materials onsite
C2	Safety Program	WBR 1452.223-81	CE	Safety Program	0	1	0	Prior to beginning work onsite
C3	Warranty	52.246-	CO	Warranty of Complex Items	1	1	1	Prior to final payment
C4	Liability Insurance	1452-228-70	CO	Acceptable evidence showing the insurance has been obtained	1	0	0	Prior to commencement of work onsite
C5	EFT Information	52.	CO	ACH Form	1	0	0	At least 14 days prior to submission of 1st invoice
C6	Release of Claims	1452-204-70	CO	Release of Claims	1	0	0	After completion of work and prior to final invoice
E1	Armature Winding	1.04.c. and 3.02.c.	D-8430	Approval Drawings and Data (1) Plan and Section Views (2) Installation Procedures (3) Winding Diagrams (4) Insulation System (5)Samples (6) Field Test Procedures	0	1	4	45 days after notice to proceed is received
E2	Armature Winding	1.04.e and 3.02.c.	D-8430	Final Drawings and Data	0	1	4	When armature winding is ready for shipment
E3	Armature Winding	1.04.f., 3.02.c. and 4.02.c.	D-8430	Test Reports (1) Factory	0	1	4	2 weeks after factory tests completed
E4	Armature Winding	1.04.f.,3.02.c. and 4.03.c.	D-8430	Test Reports (1) Field Installation	0	1	4	2 weeks after field installation tests completed

RSN	Item	Reference provision, clause, or paragraph	Respon-sible code	Submittal items	No. of sets to be sent to:*			Due date or delivery time
					C0	RE	TSC	
E5	Armature Winding	1.04.f. and 3.02.c.	D-8430	Test Reports (1) Field Acceptance (including calibration certificates)	0	1	4	Within three months after field tests completed
E6	Armature Winding	1.04.d and 3.02.c.	D-8430	Design Data	0	1	4	45 days after notice to proceed is received
E7	Armature Winding	1.04.g. and 3.02.c.	D-8430	O + M Instruction Manuals	0	0	6	When armature winding for Unit 1 is ready for shipment
E8	Wedges and Slot Fillers	1.04.c. and 3.03.c.	D-8430	Approval Drawings and Data (1) Plan and Section Views (2)Samples				45 days after notice to proceed is received
E9	RTDs (Resistance Temperature Detectors)	1.04.c. and 3.04.c.	D-8430	Approval Drawings and Data (1) Plan and Section Views	0	1	4	45 days after notice to proceed is received
E10	RTDs (Resistance Temperature Detectors)	1.04.c. and 3.04.c.	D-8430	Test Reports (1) Factory	0	1	4	2 weeks after factory tests completed
E11	Generator Inspection after Operation (first)	4.04	D-8430	Inspection Report	0	1	4	30 days after inspection
E12	Generator Inspection after Operation (second)	4.04	D-8430	Inspection Report	0	1	4	30 days after inspection
E13	Generator Inspection after Operation (third)	4.04	D-8430	Inspection Report	0	1	4	30 days after inspection

*RE indicates Regional Engineer, Boulder City NV, CO indicates Contracting Officer, Boulder City NV, and TSC indicates Technical Service Center, Denver. For mailing addresses, see subparagraph entitled "Addresses" of paragraph entitled "Submittal Requirements."

1.04 Drawings and Data to Be Furnished by the Contractor

a. General. - All drawings and data shall be in accordance with this paragraph; paragraph 1.03 (Submittal Requirements); and the applicable equipment and/or materials paragraph. All drawings and data shall be written in English, shall be made expressly for this contract (typical drawings will not be acceptable), shall be complete and accurate in their content, and shall be legible. Freehand sketches will not be accepted. Where feasible, all outline assembly and detail drawings shall be made to scale. When a scale is used to make a drawing, it shall be an engineer's or architect's scale with its graduations conforming to the United States of America foot and inch system. The scale used shall be indicated on the drawings.

The Government reserves the right to require the Contractor to make any changes in the equipment design and drawings which may be necessary to make the equipment and drawings conform to the requirements of these specifications, without additional cost to the Government.

When revised drawings are resubmitted, the changes from the previous submittal shall be clearly identified on the drawings. The submittal letters shall describe the reasons for significant changes.

After the approval drawings and data have been submitted and returned approved, with or without comments, the Contractor shall make no further changes to the design without the approval of the Contracting Officer. All of the approval drawings shall be submitted promptly. The time required for return of the approval drawings will start with the date of receipt of the last required approval drawings and data.

b. References:

ANSI C50.10 - 1990 - General Requirements for Synchronous Machines
ANSI Y14.1 - 1987 - Drawing Sheet Size and Format

c. Approval drawings and data. - Within 45 calendar days after date of receipt of notice to proceed with the contract and before beginning with factory fabrication, the Contractor shall submit to the Government for approval, five sets of all drawings and data listed below.

1. Stator coil design including sectional views of stator coils in slots with all dimensions, showing stranding, turn and ground insulation, wedges, fillers, springs, and resistance temperature detectors. Also, a view shall be submitted showing overall dimensions and angles of the coil and defining if the coils are left or right front when viewed from inside the stator bore. A drawing shall also show the coil support ring locations, tie down procedures, coil end separators, and tie and lock procedures.

2. Transposition drawing showing the location and method of insulating the transposition of the stands in the coil, development of strand cross-over, start and finish numbering system of the strand ends, connecting strands coil-to-coil, and insulation of connections.

3. Winding diagram, including an insert showing the parallel paths in each phase and showing views or notes clearly defining a slot numbering system, a method of determining the slot number in which each coil side is located, and if the coil side is in the top or bottom position. The position of slot No. 1 within the machine shall also be defined.

In addition, the Contractor shall furnish a tabulation listing each slot, and identifying each phase in the top and bottom position.

4. Plan and sectional views of parallel rings and connections between coils and parallel rings, and between parallel rings and main and neutral leads.

5. Description of the insulation and corona suppression system including a list of materials.

6. Material safety data sheets.

7. Shipping list of materials furnished.

8. Drawing showing plan and sectional views of the resistance temperature detectors.

9. Slot location of resistance temperature detectors and confirmation that resistance temperature detectors are located in slots that have the same phase in top and bottom portions of the slot. The Contractor shall also furnish a tabulation listing the slot number and corresponding phase in the slot and location from the neutral or line end of the parallel.

10. Wedge and slot filler assembly details.

11. The contractor shall submit a sample of the 3-conductor cable to be used for the resistance temperature detectors, and a 6-inch sample of the wedge and filler materials to be used.

12. A step-by-step description of the insulation system (materials and application) and a 6-inch sample taken from the slot portion of a completed coil which has an identical taping system to that proposed for these specifications.

Data shall include:

(a) Description and thickness of insulation system for strand, turn, and ground wall.

(b) Net mica thickness and volts/mil stress on turn and ground insulation.

(c) Copper cross-sectional area of strands and circuit rings.

(d) Evidence that the insulation system is class F, as defined in ANSI C50.10.

13. A step-by-step description of the removal and installation procedure. The description shall be in narrative form and shall include drawings or sketches, photographs, a list of materials, descriptive literature of resins and tapes, a list and description of tools unique to armature rewind work, and any other information necessary to clarify the description. The description should state specific installation characteristics that will prevent any and all slot materials from moving in the slots or working loose in the future, and describe a method of periodically checking the winding after installation to ensure that it remains securely installed. The description of the installation procedures shall include the following:

(a) Description of coils.

(b) Preparation of stator core to receive the new winding.

(c) Method of checking and adjusting stator core tightness and levelness including clamping bolt tension or torque value.

(d) Adjustment and insulation of surge rings.

(e) Installation of bus rings.

(f) Installation of stator coils, including method of connecting series, pole, and lead connection, and method of insulating the connections.

(g) Description and amount of side packing in slots.

(h) Method of installing spring-type wedge filler and method of measurement of tightness of coils in slots and of amount of spring-type filler compression.

(i) Method of installing and of measurement of tightness of wedges.

(j) Using a 6-inch-long by 1/2-inch-wide woven copper strap or other approved method, define the range of ohmic values that confirms an appropriate ground contact is achieved over the entire slot portion of the coil side.

14. Detailed field test procedures.

15. Calculations, including formulae, for determining the maximum forces on each coil side in the slots for same phase and for different phase coil sides.

16. A complete list of spare parts that the Contractor considers to be shelf-life limited or that require a specific storage environment.

If revised drawings are submitted for approval, the changes from the previous submittals shall be clearly identified on the drawings, with every revision made during the life of the contract shown by number, date, and subject in a revision block, and a notation shall be in the drawing margin to permit rapid location of the revision. The drawings shall be clear and legible in all respects.

The Contracting Officer shall have the right to require the Contractor to make any changes in the equipment design which may be necessary, in the opinion of the Contracting Officer, to make the equipment conform to the requirements of these specifications, without additional cost to the Government.

Approval by the Contracting Officer of the Contractor's drawings shall not be held to relieve the Contractor of any part of his responsibility to meet all of the requirements of these specifications or for the correctness of his drawings. Any manufacturing done or shipment made before approval of the drawings will be at the Contractor's risk.

Drawings shall be ANSI size D (22 inches in height, 34 inches in width).

A narrative index list shall be furnished by the Contractor indicating Contractor's drawing number and drawing title. The narrative index list shall be identified by solicitation/specifications numbers and project.

d. - Design data. - After design of the generator armature winding has been completed, but in any event within 45 calendar days after receipt of notice to proceed with the contract, the Contractor shall furnish five copies of the following calculated data regarding the generator with the new armature windings:

1. Losses for rated voltage, power factor and kilovolt ampere output, and 60 hertz, segregated as follows:

   (a) Armature I2R at both 75°C and 95°C.

2. Deviation factor of waveform.

3. Maximum value of no-load, balanced, telephone-interference factor.

4. Maximum value of no-load, residual, telephone-interference factor.

5. Maximum temperature rise in degrees Celsius above 45°C ambient, at rated volts, power factor, and kilovolt amperes for the:

   (a) Armature winding by embedded detector.

6. Field current required for operation at

   (a) Rated volts, rated power factor, and rated kilovolt amperes.

   (b) Rated volts, unity power factor, and rated kilovolt amperes.

7. The method of calculating and the value of test voltage to be used for the dielectric test for multi-turn coils, a wiring diagram of the test circuit, and a description of the test procedure.

8. Total capacitance of one phase of the armature winding to ground.

9. Calculations including formula for determining the maximum forces on each coil side in the slots for same-phase and for different-phase coil sides.

10. Nominal dielectric stress in volts per mil of the stator winding insulation.

e. - Final drawings. - When the armature winding coils are ready for shipment, the Contractor shall furnish one complete set of final drawings and computer files on 3.5-inch floppy disk or CD-ROM. All revisions shall be indicated in dated and signed or initialed revision blocks.

f. - Factory and installation test reports. - Within 2 weeks after completion of those tests required at the factory on the armature winding, resistance temperature detectors, and the spring filler materials, and those tests required on the armature windings during installation, the Contractor shall furnish five certified copies of all test reports, data, etc.

At least 2 weeks prior to start of the field tests, the Contractor shall furnish five copies of calibration certificates on all test instruments.

Within 3 months after completion of field tests, the Contractor shall furnish five certified copies of reports of the results of the field tests and shall furnish five copies of curves showing the characteristics of the machines as determined by the tests. Five copies of certificates on all test instruments calibrated after the field tests shall also be furnished.

g. - Operation and maintenance instruction manuals. - Each set of this material shall be assembled into one or more books with an enclosing cover.

The operation and maintenance instruction book(s) shall include:

1. An index sheet at the front of each book which provides page or index tab number information for each device or item of equipment in the book.

2. Manufacturer's operation and maintenance procedures; installation details, maintenance requirements.

3 Copies of all drawings (in the form of half-size prints) and bills of material, both revised to reflect approval comments.

h. - Contractor's representative. - After receipt of the approval drawings and data, and/or upon written request of the Contracting Officer, the Contractor shall, at the Contractor's own expense, send a responsible engineering representative from the Contractor's design office to the Regional Office in Boulder City Nevada, to review the drawings and the installation procedure with the Government's engineers for conformance with the requirements and intent of these specifications. The Contractor's representative shall be fully informed of the intent of the Contractor with respect to manufacture and installation and shall follow progress in the design office, the shop, and at the site. The Contracting Officer will notify the Contractor at least 10 calendar days in advance of the date set for review with the Contractor's representative.

The intent of the foregoing requirements is to avoid delay in completion of the contract which might be caused by a misunderstanding of the requirements of these specifications and especially the installation procedure.

i. Payment. - Payment for furnishing all drawings and data shall be made at the lump-sum price bid therefore in the schedule and shall include the following:

1. Performing all designs.

2. Furnishing drawings, data, and test reports.

3. Coordinating and cooperating with other Government contractors.

4. Participating in conference(s) with the Government.

1.05 Submission of Material Safety Data Sheets for Hazardous Materials

After award of contract, the Contractor shall submit updated List of Hazardous Materials (LHM) and Material Safety Data Sheets (MSDS) in accordance with the requirements of Paragraph (e) of the clause in FAR 52.223-3, "Hazardous Materials Identification and Safety Data."

The Contractor shall submit the updated LHM and completed MSDS and identification and certification for each material to the Regional Engineer. Copies of the LHM and completed MSDS shall be submitted to the Safety Program Manager, Bureau of Reclamation, P.O. Box 61470, Boulder City, NV 89006-1470 . The Contractor shall not deliver any hazardous material to the jobsite which was not included on the original LHM prior to acceptance of the Contractor's MSDS by the Regional Engineer.

The cost of complying with this paragraph shall be included in the applicable prices bid in the schedule for the items of work for which the hazardous materials are required

PART 2 - MATERIALS AND WORKMANSHIP

2.01 Materials and Workmanship

Unless otherwise stated in these specifications, materials used in the manufacture of the equipment shall be new and of the highest standard commercial quality as normally used for this type of equipment, and free of defects, considering strength, ductility, durability, best engineering practice, and the purpose for which the equipment is to be used.

Liberal factors of safety, which will assure durability and reasonably to be expected life for all new components, shall be used throughout the design and especially in the design of all parts subject to cyclic stress or shock. For all new parts of the equipment, the maximum stress in the materials shall not exceed one-third of the yield strength nor one-fourth of the ultimate tensile strength when subjected to maximum normal operating conditions (including load rejection or short circuit at the machine terminals).

2.02 Work and Materials to Be Furnished by the Government

a. The Government will provide, without cost to the Contractor, the following labor, materials, and storage, and perform the following work:

1. Disassemble the generator, including removing the generator rotor and shaft, and such other parts required to make the stator readily accessible to the Contractor.

2. Reassemble the generator after installation, dry out, and dielectric test of the new armature winding by the Contractor.

3. Furnish the cranes and crane operator as necessary when moving materials into and out of the powerplant.

The Government-operated cranes will be available for the Contractor's use based on the following backcharge. If a conflict exists, the Government will determine the necessary priorities. The crane and operator will cost the Contractor $40.00 per hour (including standby) when there is notification of the need more than 48 hours prior to use. If notification is less than 48 hours, the rate will be $60.00 per hour. Any labor, including rigging and rigger, other than the crane operator, required to handle the equipment, materials, or supplies, shall be furnished by the Contractor.

4. Furnish alternating-current electrical energy at 480 volts, 60 amperes, three-phase as required by the Contractor in connection with installation of the armature windings and field testing of the generators. The Contractor shall supply all equipment for connecting to this power supply.

5. Furnish alternating-current electrical energy at 120 volts, 15 amperes, single-phase as required by the Contractor for lighting and power tools.

6. Provide the use of the hydraulic turbine and such facilities as the Government has available for preliminary operation of the generator and for making field acceptance tests on the generator.

7. Furnish the required instruments and conduct direct-current absorption tests.

8. Furnish water. - Water can be furnished from service outlets. The Contractor shall furnish and install, at the Contractor's own expense, any additional pipelines, connections, and appurtenances required by the Contractor for the Contractor's own use or convenience in performing the work. The Contractor shall remove all such additional pipelines, connections, and appurtenances upon completion of the work. No waste of Government-furnished water will be permitted.

9. In the event storage is required for any generator materials prior to their installation, such storage shall be at the risk of and at the expense of the Contractor. The Government will, however, cooperate in providing without charge to the Contractor such inside or outside temporary project storage space as might be available for such purpose. Inside storage space is available at Parker Dam warehouse 15 miles from Headgate Rock.

10. The following listed materials are available for use by the Contractor in rewinding the generators at Headgate Rock Powerplant. These materials were shipped with the spare windings furnished by Villares and are for use in installing the Government-furnished windings. The number of available components is as noted on the shipping manifests for the spare parts. The Government does not guarantee that the numbers stated are correct. The Contractor shall inspect all spare parts shipping boxes and confirm the number, type, and condition of available materials.

Quantity	Description
1084	Spare Coils (See drawing 45-301-7210)
4378	Retainer (Spring Type)
4378	Wedge (Stationary)
4378	Wedge (Drive)
4368	Conductive Filler (Bottom, Middle, Top)
3460	Filler (Center)
2227	Filler (Side)
2260	Shim (Top)
2260	Filler (Top)
990	Felt Blocks
7600 meters	mica tape
1700 meters	glass tape
17.5 square meters	felt

2.03 Work and Materials to Be Furnished by the Contractor

a. Except as otherwise provided in the previous paragraphs, the Contractor shall furnish all labor, materials, equipment, instruments, and tools required in connection with the

manufacture, installation, and testing of the generator armature winding. The Contractor shall also furnish all labor for removal of the existing armature windings from the jobsite, including cleanup and transportation. Labor for testing shall include all labor except that furnished by the Government in conjunction with the acceptance tests. Accordingly, labor for testing shall include all major wiring connections involving the generator terminals, generator bus structure, disconnect switches, and all wiring changes involved in the main field and excitation circuit.

1. The contractor shall be responsible for all transportation and housing costs and subsistence expenses of its personnel.

2. The Contractor shall bear all costs of loading, transporting, unloading and handling all required materials from the Contractor's shipping point or points to the point of storage at the powerhouse. The Contractor shall also bear all costs of transporting test instruments and equipment to and from the jobsite.

3. The Contractor shall be responsible for all materials requiring special storage conditions, including controlling temperature, humidity, dust, or any other atmospheric conditions that are not a normal condition at the powerplant. The Contractor shall advise the Government of all materials which have a limited shelf life and which the Contractor recommends to be shipped immediately prior to installation. All hazardous materials shall be plainly identified as such on the container along with a label stating the contents, handling, and first-aid treatment. The Contractor shall also provide a storage cabinet or other suitable facilities for storing flammable or toxic materials.

4. Furnish scaffolding and work platforms as required.

5. Furnish fire protection for work area.

6. Furnish personnel safety equipment, hard hats, safety glasses, hearing protection, respirators, first aid supplies, etc.

7. Dryout of the stator winding, if necessary, will be accomplished by the Contractor.

8. Furnish wire ropes and slings for removal and installation of new stator windings as necessary.

9. Provide local (in the immediate work areas) approved flammable liquid storage cabinets to be used for the storage of solvents, resins, and other flammable liquids.

10. Conduct a safety inspection after each final shift for fire hazards, unnecessary energized equipment, and materials, boxes, etc. which may block access.

11. Each shift shall check in and out of the control room upon arrival/departure to/from the project.

12. No exhaust emissions will be allowed inside the powerhouse, which may be generated by gas or diesel driven generator sets.

13. The Contractor shall provide an On-Site Technical Supervisor who shall provide technical direction to the installation crews. This shall include but not be limited to training of special procedures which may be required to install the winding, inspection of the work to ensure that the drawings and installation procedures are being followed and quality assurance of the work, progress reports, general planning and layout of the work performance evaluation of the installation crews, and training of necessary safety procedures. The On-Site Technical Supervisor shall be present at the site at all times when work is in progress or must be available within four hours of the Government's request. The Government shall have the right to require the Contractor to replace any On-Site Technical Supervisor who fails to comply with Contract Document requirements.

14. The Contractor will be paid under the provisions of FAR clause 52.232-11 entitled "Extras," for any repairs the Contractor performs on the stator core iron or other generator components which are ordered by the Contracting Officer and which are not required because of an act of the Contractor.

PART 3 - REPLACEMENT GENERATOR ARMATURE WINDING

3.01 Type and Rating

a. General. - A new generator armature winding shall be furnished and installed by the Contractor for replacing the winding in existing generator unit No. 1. The Contractor shall install Government-furnished windings for units No. 2 and 3, including furnishing all materials not furnished by the Government. The existing generator is rated 7,222 kilovolt amperes at 4,160 volts, 0.9 power factor, 3-phase, 60 hertz. The generator is of the horizontal-shaft, water-wheel-driven, alternating-current, synchronous type, conforming to the requirements of ANSI and IEEE in regard to rating, characteristics, and tests at the time of purchase in the early 1990s. An approximation of a generator armature slot cross-section is shown on drawing no. 6 (45-301-7210, Generator Coil and Slot Cross Section).

After installation, the new generator armature shall conform to the latest American National Standards, except as may be otherwise specified. The new armature winding when operating at an elevation of 333 feet shall be rated in accordance with subparagraph b. below.

b. Rating:

Kilovolt amperes	7,222
Power factor	0.90
Frequency	60 hertz
Number of phases	3
Voltage between phases, volts	4,160
Speed, r/min	75
Armature winding	Wye connected, suitable for either grounded or ungrounded neutral operation

c. Generator data. - Information concerning the existing stator and the armature winding slots is approximately as indicated on the drawings. The Government assumes no responsibility for the uniformity of the existing stator or for the accuracy of the dimensions given. The Government, upon request, will make a generator available for inspection by any offeror, provided sufficient notice is given. Also, any offeror will be permitted to inspect operating data, test data, generator drawings, and any other material which the Government has available at the jobsite. Inspection schedules shall be coordinated with the Facility Manager of Parker Dam; telephone 760-663-0233. Inspection times are 6:30 AM to 5:00 PM Monday through Thursday.

d. The maximum temperature rise of the new stator winding shall not exceed 80°C when the generator is delivering rated load and with cooling air entering the generator at not more than 45°C. The temperature of the armature winding shall be determined by means of embedded resistance-type temperature detectors located in the armature winding. The temperature of the cooling air entering the generator shall be the ambient air temperature determined as outlined in subparagraph 4.03 (Field Tests).

The field current requirement at rated load shall not be greater than that required for the existing winding.

3.02 New Armature Winding for Unit No. 1 and Spare Coils

a. General - The new armature winding to be furnished under this contract for unit No. 1 shall be designed and manufactured to be an exact replacement of the existing winding in all ratings and dimensions except that the new winding shall contain turn insulation for turn-to-turn isolation. In additional to the coils manufactured for use in Unit 1, approximately 170 extra coils shall be manufactured for use in installing the two Government-furnished spare windings and to meet the requirements for spare parts.

b. References

ANSI C50.10 - 1990 - General Requirements for Synchronous Machines
ANSI C50.12 - 1989 - Requirements for Salient Pole Synchronous Generators and Generator/Motors for Hydraulic Turbine Applications
NEMA ME 1 - 1965 - Standard for Manufactured Electrical Mica.
IEEE Std 1 - 1986 - General Principals for Temperature Limits in the Rating of Electrical Equipment and the Evaluation of Electrical Insulation

c. Submittals - Submittals shall be in accordance with this subparagraph, paragraph 1.03 (Submittal Requirements) and 1.04 (Drawings and Data to be Furnished by the Contractor).

The Contractor shall submit for review the drawings and data listed below:

1. Approval drawings and data showing the stator coil design, strand transposition, winding diagram, plan and sectional views of coils and circuit rings, description of the insulation and corona suppression system, installation procedures, material safety data sheets, and shipping list of materials furnished.

2. Design Data.

3. Final drawings

4. Test Reports

5. Operation and Maintenance Instruction Manuals

d. Design - The following design information is provided for the existing armature winding and for the existing spare coils where appropriate:

The armature winding is rated 7,222 kilovolt amperes at 0.9 power factor, 4,160 volts, 60 hertz. There are 540 slots per generator, 4 parallels per phase, 45 coils per parallel. There are 4 turns per coil and 4 strands per turn. The strand dimensions are 0.086 X 0.277 inches. Average turn length is 69.667 inches. The core height is 17.5 inches with an inner diameter of 265 inches. Average coil cross sectional area is 0.703 X 1.019 inches (Finished Size). Coil span is 1 - 6. Resistance per phase at 75°C is 0.02888

ohms. Piled slot dimensions are 2.600 X 0.720 inches. The generator has a counterclockwise rotation when looking at the stator connection side or non-drive end of the unit

The new armature winding shall be for wye connection with three main leads and three neutral leads brought out of the stator frame. The main leads shall be suitable for connection to the existing generator voltage non-segregated phase bus structure. At the Contractor's option, the leads between the armature winding and the bus structure may be reused. The neutral leads shall pass through the existing current transformers and connect to the wye bus. The contractor may reuse the existing neutral lead extensions between the armature winding and the wye bus.

The Contractor shall apply new class F insulation throughout the entire length of the existing leads if they are reused. Existing leads shall include the terminations at the generator voltage segregated-phase bus structure. If the leads are replaced the terminations shall remain uninsulated. The armature winding will be protected by existing differentially connected current transformers and relays, for protection against ground and short-circuit faults. The main and neutral leads shall be from adequately balanced groups of each phase of the winding to facilitate relaying of turn-to-turn or ground faults.

The Contractor may reuse the existing circuit ring busses but must insulate them with class F insulation throughout. If the Contractor decides to replace the circuit ring busses, they shall be sized to prevent undue heating at a generator output of 7,222 kilovolt amperes and the current density in the bus shall not be greater than the current density in the existing bus. New circuit ring bus, if provided, shall be insulated after it has been formed to the necessary radius of curvature. Use of solvent-type varnish as a tape binder on the circuit rings, main and neutral leads, and coil interconnections will not be permitted.

The armature winding to be furnished under this contract shall be made up of multiple turn type coils. The individual strands shall be annealed copper, free from splinters, flaws, or rough spots and shall have a minimum nominal corner radius of .024 inches. The total cross sectional area of the copper conductors shall not be less than the cross sectional area of the existing conductors. At rated generator voltage, the dielectric stress from the conductor to ground (groundwall plus turn insulation) shall not exceed 60 volts per mil. There shall be sufficient space between coils in the end turn area and between jumpers to prevent electrical discharge or corona between coils.

Form-wound (multiple-turn) coils shall be of the same size and shape and shall be interchangeable. Each coil shall be separately numbered.

Each strand shall be individually insulated. The strand insulation shall be glass, dacron glass, or mica tape. The strands shall be tightly pressed and bonded together before the ground wall insulation is applied. Strand bonding resins shall have properties and characteristics to prevent bond failure due to the mechanical, thermal, and chemical effects associated with operation within the temperature limits of class F insulation systems. The turn insulation shall consist of mica tape and shall be completely impregnated or filled with a solventless epoxy or polyester resin.

Each turn shall be insulated with a minimum of two layers of half-lapped mica tape applied under constant tension.

Form-wound (multiple-turn) coils shall have at least one internal coil transposition in the coil shoulders or be transposed by an alternate method to reduce the losses (stray load), due to nonuniform current distribution, to a low value.

Before application of the ground insulation, the slot portions of the coils shall be impregnated and encapsulated with an epoxy or polyester resin bonding compound to fill and bond the transposed conductors to form a solid void-free structure.

The ground insulation shall be tape consisting of mica splittings or mica paper, and the necessary backing, binding, and filling materials. The same taping system and materials shall be used throughout the ground insulation of all power-carrying conductors, including coil interconnections. Mica splittings, if used, shall meet the requirements for NEMA grade C classification.

The ground insulation shall be completely impregnated or filled with a solventless epoxy or polyester resin using either the vacuum-pressure-impregnation process, or by means of a "B-staged" epoxy or polyester-impregnated tape. Regardless of the system used for impregnation, the insulation shall be a solid, dense structure with minimal voids or air pockets. The coils external surfaces, including the bend areas shall be smooth and free from wrinkles and surface irregularities. The coils shall be capable of being placed into position in the slots without damage to the insulation. The coils shall be treated so as to prevent permanent injury from temporary exposure to dampness. Use of solvent-type varnish as a tape binder on the circuit rings, main and neutral leads, and coil interconnections will not be permitted.

After the turn and/or ground wall insulation systems have cured, the overall coil insulation system shall not be disturbed other than replacing the protective covering (binder or armor tape).

The coils shall be provided with a protective covering and arranged or treated to reduce corona to the lowest practicable minimum. The slot portion shall be treated with a semiconducting compound to provide corona shielding. The corona shielding shall extend beyond the core and shall be graded outside each end of the core. The coils shielding shall be constructed utilizing one of the acceptable methods listed below:

1. Impregnated conductive tape is applied to cover the slot portion of the ground wall insulation and then cured. CRTV (conductive room temperature vulcanizing silicone rubber) and RTV (room temperature vulcanizing silicone rubber) are press-molded on each side of the bar/slot portion in longitudinal bands and then cured. The RTV/CRTV bands shall allow a zero clearance bar/slot interface on both sides of the bar.

2. Impregnated conductive tape is applied to cover the slot portion of the ground wall insulation through the use of "B-stage" treatments. The coils shall then have a zero clearance bar/slot interface on both sides of the bar.

The grading system shall be so constructed that no corona discharges shall exist between any two bars outside the core to cause the surface degradation at any normal operating voltages. As a minimum, the length of the conducting surface on the coil shall be long enough to ensure a separation of at least 1/4 inch at the point where the high resistance treatment begins, even when allowing for manufacturing variations. The grading system shall have been laboratory tested and proven at a voltage which is 2 kV higher than the maximum voltage between any two coils in a slot.

The coils shall be capable of being placed in the stator core slots without damage to the armor tape, semi-conducting system, or insulation system.

In order to ensure mechanical strength and to reduce the probability of hotspots, connections between coils and circuit rings shall include all strands in a common connection.

Preinsulated jumpers will not be permitted in making up series or group connections.

The Contractor shall be responsible for all the dimensions of the coils and other materials furnished new under this contract as to being correct and satisfactory for installation in the generators. Measurements shall be made on the existing generators as necessary to ensure that this requirement is met.

e. Materials - All materials used in the manufacture and installation of the new stator winding shall be compatible with each other and be rated ANSI Class F or better. The insulation shall have the capability of operating at a maximum average temperature of 120°C, which will allow for a temperature rise of 80°C over a 45°C ambient with normal service life. The insulation shall be fully cured before performance of the factory tests required by paragraph 4.02 (Factory Tests). Asbestos shall not be used in any of the insulation systems. Tapes using a polyester film (Mylar) backing will not be permitted in the insulation system. The bonding resins to be used shall have properties and characteristics, and chemical effects associated with operation within the temperature limits of the insulation system.

The Contractor shall furnish all blocking and lashing material, tape, supports, binding materials, new surge ring and surge ring insulating materials, slot fillers, slot corona treatment materials, and all other materials necessary for complete installation of the new armature winding in the stator. Spacers used in bracing the end turns at the top and bottom portions of the coils and surge rings shall be of either phenolic laminate or polyester glass laminate, and shall be covered with a material such as dacron felt. The material shall be thoroughly impregnated with a solventless epoxy or polyester resin of high insulation properties prior to its installation. Glass cord or tape shall be used to tie the blocking material and coils, and the cord or tape shall be saturated with a solventless epoxy or polyester resin prior to tying. A locking device or "figure 8" tie shall be used at the top and bottom of the slot to prevent slot materials from moving. The locking device or tie shall be located approximately one-half inch beyond the stator iron to allow limited migration of any loose slot materials as an aid to visual inspection for such migration. Blocks on the sides of coils, or other positive means, shall be provided to prevent movement of the coils. If blocks are used, they shall be tied to a straight portion of the coil at the point of exit of the coil from the core.

f. Installation - Installation of the armature windings shall be in accordance with the requirements listed in paragraph 3.05 (Winding Removal and Replacement)

g. Testing - Testing of the winding shall be in accordance with the requirements listed in paragraphs 4.02 (Factory Tests) and 4.03 (Field Tests).

h. Payment - Payment for furnishing and factory testing of the new armature winding for unit No. 1 shall be made at the applicable lump-sum price bid therefore in the schedule which price shall include the cost of all labor and materials necessary to perform the work required by this paragraph.

Payment for furnishing and factory testing 20 new armature winding coils for unit No. 2 and No. 3 shall be made at the applicable lump-sum price bid therefore in the schedule which price shall include the cost of all labor and materials necessary to perform the work required by this paragraph.

Payment for furnishing and factory testing 150 new armature winding coils to be used as spares for all three units shall be made at the applicable lump-sum price bid therefore in the schedule which price shall include the cost of all labor and materials necessary to perform the work required by this paragraph.

3.03 Wedges and Slot Fillers

a. General - Provisions shall be made for tightly wedging the coils in the slots with wedges and slot filler materials which will not shrink or buckle. Government-furnished wedges and slot materials have been furnished for units No.2 and No. 3 as noted in subparagraph 2.02 (Work and Materials to be Furnished by the Government). The Contractor shall furnish and install all wedge and slot materials for unit No. 1.

b. References;

NEMA LI 1 - 1989 Industrial Laminated Thermosetting Products
NEMA LI 6 - 1993 Relative Temperature Indices of Industrial Thermosetting Laminates

c. Submittals. - Submittals shall be in accordance with this subparagraph, paragraph 1.03 (Submittal Requirements) and 1.04 (Drawings and Data to be Furnished by the Contractor)

The Contractor shall submit the drawings and data listed below:

1. Approval drawings and data showing wedge and slot filler assembly details, samples of wedge and slot filler materials, and wedge and slot filler installation procedures.

d. Design - The contractor shall design the wedging system and slot filler system for unit No. 1 to be compatible with the existing installation. The Contractor is responsible for collecting all data and measurements necessary to manufacture wedges which will meet the requirements of this contract and which will perform as needed based on the design and ratings of the generators. For units No. 2 and No. 3, any additional materials needed to

supplement or replace Government-furnished wedges and slot material shall be provided as needed.

e. Materials -

1. Wedges shall be made from glass mat base laminate NEMA grade G-10, G-11 or better. All materials in the stator slot shall have class "F" rating. The wedges at the ends of the slot shall be of the locking type. Adhesive may be used: Provided, that the air vents are not blocked after the wedges are installed. As an alternate to the single-piece wedge, the Contractor will be permitted to furnish and install two-part, radial-pressure-type wedges: Provided, that the wedges are constructed with a positive means of measuring the amount of spring compression.

At least one wedge in each slot shall be installed with appropriately located gauging holes to provide a positive means of measuring the actual amount of spring compression.

2. Slot fillers - Slot filler strips and slot side fillers shall be fabricated from semiconducting material except the front filler strip may be constructed of non-conducting material. All materials in the stator slot shall have class "F" rating. The spring-type wedge filler material may be constructed of nonconducting material.

f. Installation - Flat filler strips of semiconducting material shall be installed at the bottom of the slot, between coils where no RTD is required and between the top coil in each slot and the spring-type wedge filler material. Side filler strips shall be tight within the slot so that a 0.002 inch feeler gauge will not enter any gap between the coil and slot sides. The 0.002 inch feeler gage "no-go" standard shall apply to at least 90 percent of the stacked core length; provided the remaining 10 percent has "go" lengths of less than 3 inches. For at least 90 percent of the machine, only one thickness of side filler shall be used and on the remaining 10 percent only two thicknesses glued together shall be used.

Spring-type wedge filler materials or other Contracting Officer-approved spring system shall be furnished and installed directly behind the wedges for providing a positive radial force on the coils. The spring compression shall be at least 150 percent of the maximum radial electromagnetic forces produced on the coils. Additionally, the amount of spring compression shall be at least 150 percent of the total amount of radial decrease of materials in the slot due to shrinkage or relaxation for the expected life of the armature winding.

The Contractor shall furnish all gauges and any other equipment required to determine the total spring compression and shall furnish instruction for using the gauges during installation and during future maintenance inspections. Care shall be exercised that blocking of the air passages cannot occur.

g. Cost. - The cost for furnishing and installing the wedges and slot filler materials as well as spring compression gauges shall be included in the lump-sum prices bid in the schedule to install the three separate windings, which price shall include the cost of all labor and materials necessary to perform the work required by this paragraph.

3.04 Indicating and Protective Devices

a. General - The Contractor shall furnish and install in each generator, 28 Resistance Temperature Detectors (RTDs). The RTDs shall be located in slots which will, as closely as possible, indicate the highest temperature obtained in operation. The RTDs will be connected to the existing terminal board by the Contractor.

b. References:

ANSI C50.10 - 1990 - General Requirements for Synchronous Machines
IEEE 119 - 1974 - Recommended Practice for General Principals of Temperature Measurement as Applied to Electrical Apparatus

c. Submittals - Submittals shall be in accordance with this subparagraph, paragraph 1.03 (Submittal Requirements) and 1.04 (Drawings and Data to be Furnished by the Contractor).

1. Approval drawings and data showing plan and sectional views of the RTDs , and a tabulated listing of RTDs and the slots they are located in.

2. Test reports.

d. Materials - The RTD's shall be standard 10-ohm-copper, 3-conductor, resistance temperature detectors. The copper detectors shall have a temperature coefficient of resistance of between 0.003830 and 0.003890 at a reference temperature of 25°C. The sensing element shall be encapsulated in a flexible heat-cured compound throughout the entire slot portion and for a short distance past the end of the slot. The leads shall be encapsulated in the same material or protected with acrylic resin-coated fiberglass sleeving.

The necessary wiring between the existing terminal board and the individual temperature detectors shall be provided and installed. The wiring shall comprise a 3-conductor, shielded cable which is oil, moisture, and heat resistant. The cable shall have armor protection against mechanical damage. The conductors shall be stranded, tinned, copper with an insulation system capable of operating at a temperature of at least 125°C. The shield of the conductor shall be grounded at one end.

e. Installation - The Contractor shall furnish and install two RTDs per parallel per phase in the armature winding located so as to indicate, as closely as possible, the highest temperature obtained in operation, with the remaining four RTDs spaced equally around the winding.

f. Testing - The required accuracy tests for the RTDs are described in paragraph 4.02 (Factory Tests)

g. Payment - Payment for furnishing, testing, and installing the RTDs shall be made at the applicable lump-sum price bid therefore in the schedule, which price shall include the cost of all labor and materials necessary to perform the work required by this paragraph.

3.05 Winding Removal and Replacement

a. General - All onsite work required to remove and replace the armature winding shall be completed in accordance with the detailed removal and installation procedure required by subparagraph 1.04 (Drawings and Data to be Furnished by the Contractor). The installation procedures shall be submitted by the Contractor within 45 days after award of contract and shall be approved by the Contracting Officer before the work is performed.

b. Removal of Existing Stator Winding - Prior to removing the existing armature winding, the Contractor shall locate and mark on the stator core the location of slot No. 1, all lead extensions, and all RTD locations. The Contractor shall remove the old armature winding including all coils, connections, and the circuit ring bus, in a manner that will not damage the stator core or other parts of the generator not being replaced. The circuit ring bus will be reinsulated and reused. The Contractor will be responsible for any damage caused in removal of the old winding.

All materials removed and not reused shall become the property of the Contractor, and shall be removed from the jobsite and promptly disposed of according to applicable regulations. Materials removed shall not be reused unless authorized by the Contracting Officer.

The Contractor shall furnish all installation materials that are not supplied by the Government. The Government-furnished installation materials are listed in paragraph 2.02 (Work and Materials to be Furnished by the Government)

The Contractor shall check the torque values of all core studs and re-torque all core studs that are loose. The Contractor shall lock the core nuts after retorqueing using an approved means so that they can not back off. The Contractor shall inspect the existing core for damage and make minor repairs. The Contractor shall check the core for localized looseness of iron and for any other condition which may contribute to heating or reduced output by the new winding. Any observed unsatisfactory conditions shall be reported to the Contracting Officer with a recommendation for the repair procedure the Contractor proposes to follow and an estimate of time and cost to complete the work.

If any additional repair work is authorized by the Contracting Officer, the Contractor shall furnish materials required and perform the work, for which he will be reimbursed for services and materials, (except for existing spare stator laminations) in accordance with FAR clause 52.232-11 entitled "Extras." The Contractor shall also be entitled to an extension in completion time for performing this work, as described in FAR clause 52.211-13 entitled "Time Extensions." The Contractor shall be responsible for the adequacy of the repairs. The method will be subject to approval by the Contracting Officer.

After the armature winding is removed from the stator core, the stator core shall be cleaned by means of a compressed air blasting procedure using an approved material (corn cob or walnut shell). The core and air slots shall be cleaned after blasting by means of compressed air and brushes as necessary.

Prior to installing the new armature winding, the Contractor shall clean and paint the existing stator core slots with a semiconductive compound to provide corona shielding. Application

of the compound by compressed air methods will not be permitted. As necessary, the Contractor shall reestablish the wedge locking grove.

c. Installation of armature winding - The Contractor shall install and connect the new armature winding complete throughout, shall connect the armature winding main leads to the generator voltage bus structure, and shall connect the armature winding for normal operation. Connections throughout the armature winding, except for bolted connections at the main and neutral leads, shall be brazed. Connections shall be brazed using a brazing filler metal having a melting temperature above 800°F (427°C). The brazing procedure shall be such as to ensure complete and thorough distribution of the brazing filler metal throughout the joint of the connection. Appropriate heat sinks shall be used on insulated conductors near the areas being brazed to prevent insulation damage from excessive heat. The heat sinks shall not use watersoaked materials in direct contact with these insulated conductors. Burned insulation or loss of the bond between the insulation and the conductor will result in rejection and replacement of the affected coil at the Contractor's expense. The coil interconnections shall be insulated with mica tape and impregnated with the solventless epoxy or polyester resin. No permanent bends shall be made in any part of the winding after insulation has been applied to that part. All work shall be performed under the technical direction of an erection engineer to be furnished by the Contractor. The installation supervisor shall be technically qualified to supervise the installation, preparation, and testing of the armature winding. The installation supervisor shall be present at the worksite during the entire installation period, and shall arrange for a representative to be present at all shifts, and shall report immediately, in writing to the Contracting Officer, any work not in accordance with the manufacturer's recommendation or any special conditions which may result in an unsatisfactory job.

The slot position of each coil shall be recorded and submitted when the rewind work is completed.

The Contractor shall furnish and install new top and bottom surge rings which are adequately insulated.

To check the adequacy of grounding of the coils in the slot, the Contractor shall measure and record the resistance between each coil side (top and bottom) and ground. The measurement method shall include the use of a 6-inch by 1/2-inch-wide woven copper strap or approved alternate, and the maximum allowable resistance shall be determined by the Contractor and shall be subject to the approval of the Contracting Officer. During and after installation of the new armature winding, but prior to reassembly of the generator, the Contractor shall dry out or cure the windings as necessary and conduct dielectric tests.

After installation is complete, the Contractor shall paint the exposed portion of the core and the wedges, the exposed portion of the coils above and below the core, series and pole jumpers, leads to the circuit ring buses, and the circuit ring buses with a epoxy enamel insulating varnish (beige color) combined with a catalyst. The total applied dry thickness shall not be less than 5 mils or exceed 15 mils. After the paint is dry, the Contractor shall locate slot No. 1 and shall number it and every tenth slot with a non-tracking, temperature resistant paint on the right and left stator packets at both ends of the core.

Government forces will reassemble the generator unit.

d. Payment - Payment for removing, preparing for disposal and disposal of the existing winding and installing the new replacement winding in unit No. 1 shall be at the applicable lump-sum price bid in the schedule, which price shall include the cost of all labor and materials necessary to perform the work required by this paragraph.

Payment for removing, preparing for disposal and disposal of the existing winding and installing the Government-furnished replacement winding in unit No. 2 shall be at the applicable lump-sum price bid in the schedule, which price shall include the cost of all labor and materials necessary to perform the work required by this paragraph

Payment for removing, preparing for disposal and disposal of the existing winding and installing the Government-furnished replacement winding in unit No. 3 shall be at the applicable lump-sum price bid in the schedule, which price shall include the cost of all labor and materials necessary to perform the work required by this paragraph

PART 4 - INSPECTION AND ACCEPTANCE

4.01 Factory Inspection

In addition to the requirements of this paragraph and the requirements listed in the "Inspection/Acceptance," paragraph of FAR Clause 52.212-4, Contract Terms and Conditions–Commercial Items, no material or equipment shall be shipped until all required tests, analyses, and shop inspections are completed, and permission is given to ship, or inspection at the shipping point is waived. Certified test reports, warranties, or other evidence of compliance with this solicitation shall be submitted and approved prior to shipment as provided in paragraph 1.03 (Submittal Requirements).

When specified or directed, the Contractor shall furnish to the Contracting Officer two copies each of mill or shipping orders, covering material or equipment required under this solicitation. All orders and reports shall quote the pertinent requirements of this solicitation and drawings, and shall state the place of manufacture, so that inspection by the Government can be performed, if required. The Contractor will be advised of those tests which will be witnessed by an authorized representative of the Contracting Officer.

Permission to ship material or equipment or waiving of inspection will not relieve the Contractor of the responsibility to conform to all of the requirements of this solicitation.

4.02 Factory Tests

References

IEEE P286 - 1998 - Recommended Practice for Measurement of Power-Factor Tip-Up of Rotating Machinery Stator Coil Insulation
IEEE 522 - 1998 - Guide for Testing Turn-to-Turn Insulation of Form Wound Stator Coils for Alternating-Current Rotating Electrical Machines

The new Contractor-furnished armature winding coils, resistance temperature detectors, and the spring filler materials shall be tested at the factory in accordance with subparagraphs (a), (b), (c), (d), (e), and (f) below. If more than one percent of the coils fail any test, production shall be stopped and the Government shall be notified. The cause of the failures shall be identified and corrected. The Contractor shall notify the Government of the intent to restart production and the Government must concur.

a. Strand test. - Each strand of each finished armature coil shall be tested for continuity and for strand-to-strand shorts at a minimum voltage of 120 volts rms using a procedure approved by the Contracting Officer at the time of drawing and data submission under paragraph 1.04 (Drawings and Data to be Furnished by the Contractor). This test shall demonstrate that each strand has maintained its electrical isolation from every other strand throughout the manufacturing process. The manufacturer shall submit the proposed test procedure to the Contracting Officer for approval. Finished coils failing the strand test shall not be reworked, but shall be rejected and not furnished as part of this contract.

b. Each coil of the armature winding shall be given dielectric tests at the factory after completion of manufacture and immediately prior to packing for shipment. Each armature coil shall be given an alternating-current test at 60 hertz, and 14,000 volts rms, for 1 minute.

Each coil shall be given an induced or applied dielectric test to demonstrate the ability of the coil turn insulation to withstand the dielectric stresses associated with traveling waves. The test voltage to be applied shall be in accordance with Figures (1) and (2) of Section 6, of IEEE 522. The Contractor shall furnish a description of the procedure and the test parameters for performing the test.

Coils failing either the high-potential ground wall or the turn-to-turn dielectric tests specified above shall not be reworked or refinished, but shall be rejected and not furnished as part of this contract.

c. The Contractor shall perform power factor tip-up tests at the factory in accordance with IEEE No. P286. The tests shall be made separately on each coil. The test shall be made by measuring the power factor (expressed in percent) at 600 and 2,400 volts rms, and determining the numerical difference in the values. If the numerical difference is greater than 1 percent (0.01 power factor), the coil shall be rejected. Measurements may be made by energizing the conductor and grounding the insulated slot portions by means of a clip attached to the center of each leg. The test value of tip-up shall be stamped, marked, painted, or noted by some other means on each coil so that the values can be easily identified at the time of installation. Any coil that fails the power factor tip-up test shall not be reprocessed without the Contracting Officer's approval.

Test reports, indicating the measured power factors of each coil tested, shall be furnished as required by subparagraph 1.04 (Drawings and Data to be Furnished by the Contractor).

d. In addition to the power factor tip-up test, every tenth coil produced shall be given a dissipation factor test. This test shall consist of subjecting the coil, using the same test setup as the power factor tip-up test, to ac voltages of 10 through 200 percent of rated line-to-ground voltage. To compensate for occasional measurement anomalies, the averaging of a single step value not meeting the specified criteria with the next highest step will be permitted. Should the two steps have different acceptance criteria, these also may be averaged. For each coil that fails the dissipation factor test, four additional coils shall be tested. The dissipation factor shall be measured as a function of voltage at 20 percent intervals of rated voltage, i.e., 20, 40, 60, 80, 100, 120, 140, 160, 180 and 200 percent. Dissipation factors shall not exceed the values given in the following table:

For each 20 % interval between			The dissipation factor shall not increase by more than
20%	and	60%	0.0015
60%	and	120%	0.003
120%	and	200%	0.004

e. Two percent of the spring type filler material to be used for the new installation shall be subjected to the test described in this paragraph. Failure to pass this test shall require the spring material to be redesigned and retested. The spring height is defined as the total height of the spring minus the material thickness (the distance the spring can be compressed). Samples of each size to be used in the new installation shall be tested. The force required for an 80 percent reduction in spring height shall be at least 110 pounds per square inch (psi). After this measurement, the test samples shall be conditioned by compressing them 100 percent (completely flat) between two plates. They shall be kept at 120°C for 168 hours. After conditioning, the force required for an 80 percent reduction in spring height shall be at least 70 psi. The uncompressed spring height shall have shrunk less than 20 percent. All test results shall be submitted at least 30 days prior to shipment of the springs.

f. Each resistance temperature detector that will be located in the armature winding shall be tested for accuracy by comparison with a suitable standard. Each detector shall be tested at 25, 80, and 120°C. The tests shall be made in the presence of a Government inspector. Test reports shall be furnished as required by subparagraph 1.04 (Drawings and Data to be Furnished by the Contractor).

g. Cost - The cost for factory testing the new armature winding for unit No. 1 shall be included in the appropriate lump-sum price bid in the schedule for furnishing the new armature winding and shall include the cost of all labor and materials necessary to perform the work required by this paragraph.

The cost for factory testing the new RTD's for all three units shall be included in the lump-sum price bid in the schedule for furnishing the RTD's and shall include the cost of all labor and materials necessary to perform the work required by this paragraph

4.03 Field Tests

References:

ANSI C50.10 - 1990 - General Requirements for Synchronous Machines
IEEE 115 - 1995 - Test Procedures for Synchronous Machines

a. Once every 24-hour period, the coils installed during that period, including final installation of slot filler and wedges, shall be given the following tests. In the event any coil fails during the tests, it shall be removed and replaced with a new coil by the Contractor at the Contractor's own expense.

(1) 15,850 volts direct current for 1 minute.

(2) The value of resistance to slot walls shall be measured on all coils after they have been properly tightened in the circumferential direction. Measurements shall be taken at three locations: at each end of the generator stator core and at the axial center. The acceptable range of contact resistance shall be noted on the report. If values outside of the range are measured, the coil seating shall be corrected. A report of the complete readings shall be submitted.

(3) Each coil shall be given either an induced or applied dielectric test. The test voltage shall be not less than two-thirds of either the test voltage required by subparagraph 4.02 b. (Factory Tests), or the test voltage determined by the Contractor as required by subparagraph 1.04 (Drawings and Data to be Furnished by the Contractor), whichever test voltage is the greater. This test shall be performed before the coil-to-coil connections are completed.

b. After the winding has been completely assembled, dried out, or cured, if necessary, and before installation of the rotor, the Contractor shall, at the Contractor's own expense, give each phase of the armature winding an alternating-current, 60-hertz dielectric test of 9,.320 volts rms for 1 minute, in accordance with ANSI C50.10.

The Contractor shall furnish a potential transformer and calibrated voltmeter to check the voltage applied by the alternating-current, high-potential test set. However, this equipment need not be furnished if the Contractor accepts the accuracy of the voltmeter supplied with the high-potential set. The Contractor must verify that the test voltage for any required test is at least as great as specified for that test.

After the Contractor successfully completes the alternating-current dielectric test, the Government will give each phase of the armature winding a direct-current dielectric test to 9,000 volts on a time-voltage schedule selected by the Government to demonstrate absorption values of the winding.

In the event any coils fail during the alternating- or direct-current dielectric tests, the Contractor shall locate and replace them at the Contractor's own expense.

After completion of each armature winding and prior to completion of the main lead connections, the Contractor shall measure the armature winding resistance in accordance with IEEE No. 115. The average temperature of all armature winding RTD devices, recorded within 30 minutes of the time the resistance measurements are taken, shall be used as the stator ambient temperature. This temperature shall be used to calculate the corrected stator winding resistance at 75°C. The Contractor shall also measure the field resistance at this time. The test instruments shall be appropriately calibrated.

The Contractor is reminded that these values of armature resistance will be used to determine compliance with the warranted losses.

c. After generator No. 1, including its auxiliary equipment, has been reassembled by the Government, it shall be tested by and at the expense of the Contractor, to determine if the Contractor's warranties and the requirements of this contract have been fulfilled. The tests shall be made in accordance with the applicable standards of IEEE and ANSI except as herein noted.

(1) Open-circuit saturation test.

(2) Short-circuit saturation test.

(3) Zero-power factor saturation test.

(4) Heat runs. - Heat runs shall be made to determine the temperature rise of the various parts of the generator when operating continuously at rated kilovolt ampere, rated power factor, 60 hertz, and at rated volts. When existing head conditions or other limitations will not permit operation at the full rating of the new winding, then three heat runs shall be conducted. One load shall be at 7,222 kilovolt-amperes or the maximum available turbine output, another load shall be at 90% load or 6,500 kilovolt-amperes, and the third load shall be at 80% load or 5,777 kilovolt-amperes.

The temperature rise of the armature winding shall be determined by embedded resistance temperature detectors, the temperature rise of the generator stator core by thermocouples or by resistance temperature detectors on the back and other accessible areas of the generator stator core, and the temperature rise of the field shall be determined by the resistance method. The average temperature indicated by the highest reading temperature detector during the period of stable temperatures shall be used to determine the temperature rise of the armature winding. The average temperature of the air leaving all the surface coolers of the generator during the period of stable temperatures shall be used as the ambient temperature upon which to base the determination of the temperature rise of the armature and field windings. Sufficient thermometers, thermocouples, or resistance temperature detectors shall be placed in the cooler air discharge path, between 6 to 10 inches from the surface coolers, to obtain accurate temperature information.

The following procedure shall be used for locating the temperature devices in the cooler air discharge in order to obtain accurate average temperature:

Not less than 20 temperature devices shall be installed in the path of the discharge air from one cooler. The devices shall be installed between 6 to 10 inches from the face of the cooler and shall be spaced at approximately equal intervals. With the generator operating under approximately rated load, temperature readings of all temperature devices on this one cooler shall be observed and recorded, and the readings shall be averaged. The average temperature so determined shall then be used to locate at least four temperature devices in the air discharge path from each cooler in positions which will represent average temperature. The average of all temperature devices (at least four per cooler) will then represent the ambient air temperature for the generator during the period of stable temperature. This value for ambient air temperature will also be used as the ambient temperature upon which to base the temperature rise of other various machine parts.

(5) Ozone concentration test via a pump.

(6) Deviation factor of waveform. - Oscillograms shall be taken of the waveform of the voltage of each phase of the armature winding when the generator is operating at rated voltage and open circuit.

(7) Balanced and residual component telephone influence factor (TIF) determination.

All tests other than those listed in subparagraphs a. and b. above shall be made at a time convenient to the Government, not to exceed 18 months following completion of installation of the armature winding.

The Contracting Officer will keep the Contractor advised of the time when these field tests can be conducted and will notify the Contractor 30 days in advance of the dates the tests are to be performed. The waiving of any test on the generator, by the Government shall not constitute relinquishment of the Contractor's responsibility to completely meet the requirements which were to have been demonstrated by that test. All instruments used for the tests shall be calibrated by and at the expense of the Contractor before and after the tests by comparison with suitable standards. All test reports shall be furnished as required by subparagraph 1.04 (Drawings and Data to be Furnished by the Contractor).

The Contractor's installation supervisor, or the supervisor’s representative, shall remain at the jobsite until a formal signed release from the representative of the Contracting Officer, verifying that the field tests required under this paragraph have been completed in accordance with this contract, is obtained by that person.

The Contractor shall provide field test reports as required by Table 1.03-1 (List of Submittals).

d. Cost - The cost for performing the field installation tests on the Government-furnished armature windings installed in units No. 2 and No. 3 shall be included in the applicable lump-sum price bid in the schedule for installing and testing Government-furnished windings, and shall include the cost of all labor and materials necessary to perform the work required by this paragraph.

The cost for performing the field installation tests and the field acceptance tests on the Contractor-furnished armature winding for unit No. 1 shall be included in the appropriate lump-sum price bid in the schedule for installing and field testing unit No. 1 winding, and shall include the cost of all labor and materials necessary to perform the work required by this paragraph.

4.04 Generator Inspections after Operation

During the 5-year warranty period, there shall be at least three inspections made during which the Contractor's armature winding specialist or specialists, and representatives of the Contracting Officer, shall participate together in a thorough inspection of all equipment and materials furnished by the Contractor. The Government will give the Contractor no less than 20 calendar days prior notice of the date for each inspection. The Government will make the unit available for the inspections and may at its option remove the rotor or sufficient covers to permit a thorough inspection, at no cost to the Contractor for each inspection period. The Contractor will be responsible for all expenses incurred by the Contractor's representative or representatives in connection with these inspections, including costs of reports of results of the inspections.

The inspection periods, after the unit is released for online service, are expected to be (1) between 6 months and 1 year, (2) between 2 and 2-1/2 years, and (3) prior to expiration of the 5-year warranty period. Inspections of the armature windings shall include those items listed in the method of periodical inspection and testing of the windings after installation, submitted by

the Contractor in accordance with subparagraph 1.04 (Drawings and Data to be Furnished by the Contractor) and the following items:

a. Determine that all coils and other materials are tight in the slot and have not moved.

b. Determine that all wedges, radial packing, blocking, and lashing are tight.

c. Inspect the stator frame and/or winding components for abnormalities which shall include, but not be limited to:

(1) Loose stator laminations, loose generator stator core clamping bolts, loose clamping fingers, and hot spots or paint discolorations.

(2) Presence of corona dust or powder or other deposits, which may be related to deterioration of the stator winding or to looseness of the generator stator core laminations.

(3) Unusual movement, cracking, or distortion.

(4) Deterioration of the ring buses and main leads.

d. Perform corona probe, programmable direct-current high-voltage ramped tests, coil-surface contact-resistance tests, and any other agreed-upon tests for possible internal slot or end-turn corona. The Government will furnish all test equipment for performing the corona probe and the programmable direct-current high-voltage ramped test, and for the coil-surface contact- resistance test. The Contractor shall furnish all test equipment required for other agreed-upon tests.

After each inspection, the Contractor shall furnish the required number of certified reports of the results of the inspection for approval of the Contracting Officer. Each report shall incorporate the method of checking the winding as described above. Any repairs found necessary shall be performed by the Contractor under FAR clause 52.246-18 entitled “Warranty of Supplies of a Complex Nature”.

e. Cost - The cost for performing generator inspections and providing inspection reports during the warranty period shall be included in the applicable lump-sum costs for installing and testing the armature windings for all three units and shall include all labor and materials necessary to perform the work required by this paragraph.

PART IV
CONTRACT DOCUMENTS, EXHIBITS, AND ATTACHMENTS

1. List of Attachments

(a) Drawings, General

The drawings of Headgate Rock Powerplant show the general arrangement of the plant and equipment. Except as otherwise provided, the drawings are not to be considered as defining the design of the equipment to be furnished, but are merely illustrative of the technical requirements. The Contractor shall design, furnish, and install equipment which is fully compatible with the illustrative design shown on the drawings. Approval from the Contracting Officer is required prior to using the proposed design.

In case of differences between the drawings and Technical Requirements, the Technical Requirements shall govern.

(b) List of Drawings

The following attached drawings are made a part of the specifications:

Headgate Rock Powerplant

1. 1117-D-2 - General Map
2. 1117-D-3 - Location Plan
3. 1117-D-4 - General Plan
4. 1117-D-7 - General Arrangement - Deck EL 373.00
5. 1117-D-11 - General Arrangement - Transverse Section & Unit 2
6. 45-301-7210 - Generator Coil and Slot Cross Section

Manufacturer's Drawings

7. 26E113005 - Generator Outline
8. 26E113037 - Stator Connections Assembly
9. 26E113045 - Stator Winding Diagram
10. 26D113054 - RTD Locations
11. 26D113285 - Wedge Assembly and Slot Content
12. 26C113286 - Stator Slot Wedge

Standard Drawings

13. 40-D-6234 - Standard Name Plates
14. 40-D-6568 - Title Blocks & Borders
15. 40-D-6569 - Title Blocks & Borders
16. 40-D-841 - Excitation System Performance
17. 104-D-968 - Electrical Installation - Stator Coil Diagram

Information Only Drawings

18. 557-D-3524 - Glen Canyon Powerplant - Units 1, 3, 5, and 6 - Electrical Installation - Armature Winding Layout

PART V
SOLICITATION PROVISIONS

1. 52.212-1 Instructions to Offerors -- Commercial Items (Aug 1998)

(a) Standard Industrial Classification (SIC) Code and Small Business Size Standard. The SIC code and small business size standard for this acquisition appear in Block 10 of the solicitation cover sheet (SF 1449). However, the small business size standard for a concern which submits an offer in its own name, but which proposes to furnish an item which it did not itself manufacture, is 500 employees.

(b) Submission of Offers. Submit signed and dated offers to the office specified in this solicitation at or before the exact time specified in this solicitation. Offers may be submitted on the SF 1449, letterhead stationery, or as otherwise specified in the solicitation. As a minimum, offers must show----

(1) The solicitation number;

(2) The time specified in the solicitation for receipt of offers;

(3) The name, address, and telephone number of the offeror;

(4) A technical description of the items being offered in sufficient detail to evaluate compliance with the requirements in the solicitation. This may include product literature, or other documents, if necessary;

(5) Terms of any express warranty;

(6) Price and any discount terms;

(7) "Remit to" address, if different than mailing address;

(8) A completed copy of the representations and certifications at FAR 52.212-3;

(9) Acknowledgment of Solicitation Amendments;

(10) Past performance information, when included as an evaluation factor, to include recent and relevant contracts for the same or similar items and other references (including contract numbers, points of contact with telephone numbers and other relevant information); and

(11) If the offer is not submitted on the SF 1449, include a statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation. Offers that fail to furnish required representations or information, or reject the terms and conditions of the solicitation may be excluded from consideration.

(c) Period for Acceptance of Offers. The offeror agrees to hold the prices in its offer firm for 30 calendar days from the date specified for receipt of offers, unless another time period is specified in an addendum to the solicitation.

(d) Product Samples. When required by the solicitation, product samples shall be submitted at or prior to the time specified for receipt of offers. Unless otherwise specified in this solicitation, these samples shall be submitted at no expense to the Government, and returned at the sender's request and expense, unless they are destroyed during preaward testing.

(e) Multiple Offers. Offerors are encouraged to submit multiple offers presenting alternative terms and conditions or commercial items for satisfying the requirements of this solicitation. Each offer submitted will be evaluated separately.

(f) Late Offers. Offers or modifications of offers received at the address specified for the receipt of offers after the exact time specified for receipt of offers will not be considered.

(g) Contract Award (not applicable to Invitation for Bids). The Government intends to evaluate offers and award a contract without discussions with offerors. Therefore, the offeror's initial offer should contain the offeror's best terms from a price and technical standpoint. However, the Government reserves the right to conduct discussions if later determined by the Contracting Officer to be necessary. The Government may reject any or all offers if such action is in the public interest; accept other than the lowest offer; and waive informalities and minor irregularities in offers received.

(h) Multiple Awards. The Government may accept any item or group of items of an offer, unless the offeror qualifies the offer by specific limitations. Unless otherwise provided in the Schedule, offers may not be submitted for quantities less than those specified. The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit prices offered, unless the offeror specifies otherwise in the offer.

(i) Availability of Requirements Documents Cited in the Solicitation.

(1) (i) The GSA Index of Federal Specifications, Standards and Commercial Item Descriptions, FPMR Part 101-29, and copies of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained for a fee by submitting a request to--GSA Federal Supply Service Specifications Section, Suite 8100, 470 L'Enfant Plaza, SW., Washington, DC 20407, Telephone (202) 619-8925, Facsimile (202) 619-8978.

(ii) If the General Services Administration, Department of Agriculture, or Department of Veterans Affairs issued this solicitation, a single copy of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained free of charge by submitting a request to the addressee in paragraph (i)(1)(i) of this provision. Additional copies will be issued for a fee.

(2) The DoD Index of Specifications and Standards (DoDISS) and documents listed in it may be obtained from the Department of Defense Single Stock Point (DoDSSP), Building 4, Section D, 700 Robbins Avenue, Philadelphia, PA 19111-5094 (telephone (215) 697-2667/2179, Facsimile (215) 697-1462.

(i) Automatic distribution may be obtained on a subscription basis.

(ii) Order forms, pricing information, and customer support information may be obtained--

(A) By telephone at (215) 697-2667/2179; or
(B) Through the DoDSSP Internet Site at http://www.dodssp. daps.mil.

(3) Nongovernment (voluntary) standards must be obtained from the organization responsible for their preparation, publication or maintenance.

(j) Data Universal Numbering System (DUNS) Number. (Applies to offers exceeding $25,000.) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation “DUNS” followed by the DUNS number that identifies the offeror's name and address. If the offeror does not have a DUNS number, it should contact Dun and Bradstreet to obtain one at no charge. An offeror within the United States may call 1-800-333-0505. The offeror may obtain more information regarding the DUNS number, including locations of local Dun and Bradstreet Information Services offices for offerors located outside the United States, from the Internet home page at http://www.dnb.com/. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at customerservice@mail.dnb.com.

2. Addendum to 52.212-1 Instructions to Offerors -- Commercial Items (Aug 1998)

(a) Modification to paragraph (c). The offeror agrees to hold the prices in its offer firm for 60 calendar days from the date specified for receipt of offers.

(b) Modification to paragraph (h). Multiple awards will not be made on this solicitation.

(c) Additional Applicable Provisions:

(1) 52.233-2 Service of Protest (Aug 1996) Department of Interior (Jul 1996) (Deviation)

(a) Protests as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from: Contracting Officer, Bureau of Reclamation, P.O. Box 61470, Boulder City NV 89006-1470.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(c) A copy of the protest served on the Contracting Officer shall be simultaneously furnished by the protester to the Department of Interior Assistant Solicitor for Procurement and Patents, 1849 C Street, NW, Room 6511, Washington, D.C. 20240.

(2) WBR 1452.233-80 Agency Procurement Protests -- Bureau of Reclamation (Sep 1997)

(a) Executive Order 12979, Agency Procurement Protests, establishes policy on agency procurement protests. This policy is implemented at section 33.103 of the Federal Acquisition Regulation. For solicitations issued by the Bureau of Reclamation, an interested party may request independent review of its protest by the Bureau Procurement Chief.

(b) This independent review is available as an alternative to consideration by the contracting officer or as an appeal of the contracting officer's decision on a protest. An interested party may:

(1) Protest to the contracting officer;

(2) Protest directly to the Bureau Procurement Chief, without first protesting to the contracting officer; or

(3) Appeal a contracting officer's decision to the Bureau Procurement Chief.

(c) An appeal of the contracting officer's decision must be received by the Bureau Procurement Chief (Bureau of Reclamation, Denver Federal Center, Bldg. 67, P.O. Box 25007 (D-7800), Denver, CO 80225-25007) no later than 3 days after receipt of that decision by the interested party. The Bureau Procurement Chief shall render a decision no later than 5 days after receipt of an appeal.

(d) If there is an appellate review of the contracting officer's decision by the Bureau Procurement Chief, it will not extend the General Accounting Officer's timeliness requirements. Therefore, any subsequent protest to the GAO must be filed within 10 days of knowledge of initial adverse agency action (4 CFR 21.2(a)(3)).

(3) Site Visit

(a) Offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) An organized site visit has been scheduled for July 22, 1999, at 10 am Mountain Standard Time. Those offerors wishing to attend the site vist should contact the Parker Dam Facilities Manager at 760-663-3712.

(c) Participants will meet at the Headgate Rock Dam Powerplant parking area.

(4) WBR 1452.215-81 General Proposal Instructions -- Bureau of Reclamation (Jul 1997)

(a) General contents. Each proposal shall: be specific and complete in every detail; conform to all solicitation provisions, clauses, or other requirements; be logically assembled, practical, legible, clear, concise, coherent; and contain appropriately numbered pages of each volume or part.

(b) Arrangement of Proposal. The proposal shall consist of two physically separated volumes. The required number of copies for each volume are shown below:

Volume	Title	Copies Required
I	Technical Proposal	5
I	Pricing/Cost Proposal	3

(c) Separation of volumes. All copies of each proposal volume (i.e., all copies of Volume I) are to be packaged individually and clearly marked to identify contents. The exterior of each package containing proposals shall be marked with the solicitation number, and the time and date for submission of proposals, in order to prevent mishandling.

VOLUME ONE shall contain:

(1) A narrative technical proposal which describes how your firm plans to perform the work required by the Statement of Work, including a description of your proposed winding/core design. Offerors are requested to use the items enumerated under 1.04. "Drawings, Data, and Representative To be Furnished by the Contractor" as a general format to follow, without providing actual contract-type submittals, detailed electrical or mechanical drawings, or voluminous backup materials. Your narrative proposal must be in sufficient detail to allow the Government to evaluate your proposed design. Include such information as:

(i) Proposed design, schedule/logistics, and installation procedures, (including any proposed subcontractors);

(ii) Proposed manufacturing facilities (location, any specialty machinery you have available, a description of the facilities, a discussion of your quality assurance procedures, etc. - including the same information for any proposed subcontractors);

(iii) Proposed key personnel (Project Manager, Designer(s), Field Installation Supervisor, etc.) - including any subcontractor personnel in these key roles;

(iv) Any expected delivery or performance problems/issues.

(2) Past performance information -

(i) Reference - Provide a list of relevant past performance references of projects similar in size and scope to this requirement. Your listing must include: customer's name, address and name/phone number of contact; dollar amount of contract; contract number; dates of performance; and a brief description of the project.

(ii) Terminations - Provide a list of any Federal/State Government contracts/subcontracts or commercial contracts/subcontracts awarded to your firm (or that identified key personnel have participated in) in the past 10 years which were terminated for default, convenience or any other reason. Include the information requested in (a) above and a narrative explanation as to the circumstances that occasioned the termination and a discussion of its resolution.

(iii) Claims - Provide a list of any claims under any Federal or State Government contracts filed by your firm in the past 5 years. Include all the information requested in (a) above for each claim and a brief explanation as to the circumstances that necessitated the filing of the claim as well as its ultimate resolution.

(iv) Late performance/unacceptable items - Provide a listing of any contracts/subcontracts which were not completed in the required performance time schedule under any Government or commercial contract your firm has been awarded in the last 10 years. Describe the reason(s) for the late performance, including any mitigating factors (e.g. were there circumstances which were beyond your control, such as delay by the Government or commercial customer?), and discuss the resolution/outcome of the late performance. Have any of your firm's previous contracts/subcontracts had options which were not exercised due to late performance?

Also prepare a list of any contract/subcontract items/supplies/installations which were rejected or deemed unacceptable by a Government Contracting Officer or other customer in the same 10-year period.

(v) Pre-award factory inspections - Have the facilities your firm is proposing to utilize ever been determined to be unacceptable during a pre-award factory inspection by a Government agency? If so, discuss what occasioned this determination and what you firm has done to remedy/improve the unacceptable facility.

NOTE: In addition to the past performance information submitted with your proposal, Reclamation may gather additional information from other sources, both inside and outside of the Government.

VOLUME TWO shall contain:

(1) A fully executed copy of Standard Form 1449 "Solicitation/Contract/Order for Commercial Items";

(2) A fully completed set of the "SF1449 Block 20 Continuation" (Schedule) pages, with all prices entered for the Schedule Items, the Spare Parts, and the Warranted Losses you are proposing.

(3) A fully completed set of the proposed completion schedule requested in the Time of Delivery clause in Part II, paragraph 2(B).

(4) A fully executed and completed copy of the provision entitled "52.212-3 Offeror Representations and Certifications -- Commercial Items".

(5) A fully completed copy of the proposed sucontracting plan required under FAR 52.219-9, entitled “Small Business Subcontracting Plan.”

3. 52.212-2 Evaluation -- Commercial Items (Jan 1999)

(a) The Government will award a contract resulting from this solicitation to the responsible offeror whose offer conforming to the solicitation will be most advantageous to the Government, price and other factors considered. The following factors shall be used to evaluate offers:

(1) Technical Capability to perform or provide the following major items of work:

(i) Armature windings,
(ii) Efficiency and Warranted Losses Armature Windings (Price Evaluation)

(2) Timely Installation and Testing of Unit #2 Armature Windings.

(3) Manufacturer’s Experience and Key Personnel

(4) Previous Corporate Experience.

(5) Past Performance.

(i) Past Projects,
(ii) Reliability, and
(iii) Facilities

(6) Transportation.

(7) Installation and Removal Plan.

(8) Design Innovations/Design Methods.

(9) Risk.

(10) Price.

Technical and past performance, when combined, are significantly more important than cost or price as shown below in the Relative Weight of Evaluation Factors paragraph. Non-cost factors comprise 75% of the total evaluated weight.

(b) Relative Weight of Evaluation Factors.

(1) Technical Capability to perform or provide the major items of work. This evaluation factor will comprise 20% of the total evaluation weight.

The merits of the technical analysis and recommendations for new or modified equipment will be evaluated for each of the following components and characteristics. The proposal will also be reviewed and evaluated for statements regarding degree of compliance with specifications for any new equipment offered, and if the equipment does not comply, evaluation will be made of the explanations of how the proposed equipment will provide a satisfactory substitute for the requirement.

The following major items to be evaluated are generally listed in descending order of importance with respect to the overall rewind replacement, new core and reconditioned exciter. Strong emphasis will be placed on the method and completeness of the technical studies, acceptability of recommendations, and acceptability of materials and methods of component modifications where acceptable. Each major item will be reviewed individually and with respect to the total rewind replacement, new core and reconditioned exciter. Specific evaluation subfactors, which are critical to each major item, are listed with the description of the item.

(i) Armature windings. A new armature winding is required to replace the existing winding. Technical data furnished with the proposal shall indicate the insulation class and temperature rise of the new winding and shall include details of the winding construction and installation and dimensions of the coil. Evaluation subfactors include but are not limited to design of winding, wedge design, installation methods, proposed testing methods/procedures, type of insulation and testing methods at each stage of coil manufacturing, operating temperatures, losses, spare parts requirements, maintenance requirements, and general engineering approach.

(ii) Efficiency and Warranted Losses on Armature Windings (Price Evaluation).

a. The offeror must provide complete calculations for the machine's replaced winding to clearly define the losses and furnish the expected value of total efficiency. The efficiency shall include all excitation system losses.

b. Refer to Clause WBR 1452.246-81, entitled "Failure to Meet Performance Warranties."

(2) Timely Installation and Testing of Armature Windings for Unit #2. This evaluation factor will comprise 15% of the total evaluation weight.

The dates specified in the schedule are considered highly important. Evaluation will be based on the offeror's ability to install and test the Government-furnished winding in Unit #2 in a shorter period of time than the specified required time stated in the schedule.

The Government will evaluate equally, as regards time of delivery, offers that propose completion of Generating Unit No. 2 within the Desired and Required Completion Schedules. Offers that propose to meet or complete the work prior to the Desired Completion Schedule (December 1, 1999) will be awarded the maximum points available. Offerors proposing less than the Desired Completion Date, but more than the maximum Required Completion Date (December 2, 1999 thru January 30, 2000) will be scored proportionately less than the maximum. Offerors meeting the maximum Required Completion Date (January 31, 2000) will receive no points. Offers failing to include the "Proposed Completion Schedule" with their proposals will not be considered for award.

Offers placing conditions of delivery (e.g. award of contract by a specific date, approval of drawings, etc.) will not be considered for award. See provision WBR 1452.215-81 General Proposal Instructions, for specific information to be provided with the offer regarding evaluation of this factor.

(3) Manufacturer's Experience, Key Personnel and Facilities. This evaluation factor will comprise 10% of the total evaluation weight.

(i) The offeror's previous experience, personnel capability, and plan capability are of considerable importance and all aspects of these items which the offeror describes will be evaluated. The manufacturing locations described must be those intended for actual production under the contract. No change will be permitted without the approval of the Contracting Officer. Evidence shall be furnished of the offeror's experience in the design, manufacture and installation of major generator components such as armature windings. If the offeror will purchase any component from another manufacturer, he shall furnish the above evaluation criteria for such manufacturer.

(ii) Include the proposed organization to manage the work, its relationship to the offeror's overall corporate structure, and the function and responsibilities of any subcontractors. Identify and furnish qualifications for the key staff who will oversee the major tasks involved in manufacturing, transportation, and onsite removal, installation (including testing), and disposal activities. Information to be furnished shall include the following:

a. The identity of specific personnel to be assigned to perform the requirements contained in the work statement;

b. The names of specific key personnel to be assigned for direct work on the project and as direct technical supervisors including education, background and experience, accomplishments, and other pertinent information; and

c. A statement of assurance that the proposed key staff, subcontractors, and/or consultants will be available for work on this contract.

(4) Previous Corporate Experience. This evaluation factor will comprise 10% of the total evaluation weight.

Offeror's previous corporate similar experience over the last 10 years in jobs with similar salient characteristics, e.g., voltage, MVA, armature winding and winding configuration. Offeror's shall provide information demonstrating expertise, resources, facilities, and experience in the manufacture, transportation, and removal/installation of generator armature windings, cores and exciter reconditioning which comply with U.S. standards including ANSI, NEMA, IEEE, and ASTM.

(5) Past Performance. This evaluation factor will comprise 5% of the total evaluation weight.

(i) Past Projects. The Offeror shall furnish a list showing the inservice date, type of contract, performance record for each of the generator armature windings, cores and exciter reconditioning listed in (1) above, the address, and telephone number, the contract dollar value initial and final, for each project listed in (1) above. Provide a list of projects similar in scope and magnitude to the work required under this solicitation which the offeror has completed during the last 10 years. For each project, include:

a. Name of the project;

b. Description of the work;

c. Contract number, date and type;

d. Name and address of the acquiring Government agency or commercial customer;

e. Initial contract amount and final contract amount;

f. Any problems encountered in performance of the work and corrective action(s) taken; and

g. Name(s) and telephone number(s) of references from the acquiring agency or customer who may be contacted for further information.

(ii) Reliability. The Offeror shall furnish a list of customer's with the following information on armature windings, core and exciters of a similar design including (i) those under warranty, (ii) those in which the warranty period has expired and (iii) those which have failed while under warranty.

(iii) Facilities. The Offeror shall provide information on all plant and test facilities (including Government facilities) proposed to perform and accomplish the work . The need for any special plants and/or facilities shall be fully substantiated. Information shall be furnished on any planned use of alternate plants/facilities. Reclamation may conduct a preaward inspection of the proposed manufacturing facilities.

(6) Transportation Plan. This evaluation factor will comprise 5% of the total evaluation weight.

The Offeror shall furnish a detailed plan for transporting the generator armature windings to/from Headgate Rock Powerplant (if applicable). This plan shall demonstrate the Offeror's familiarity with the difficulties of transporting these items by rail, over highways with weight and traffic restrictions, transmission line clearances and narrow roads in the vicinity of Headgate Rock Dam Powerplant.

(7) Installation and Removal Plan. This evaluation factor will comprise 5% of the total evaluation weight.

(i) The offeror shall identify the proposed field testing firm; describe the proposed installation plan for the generator armature windings, core and reconditioned exciter, describe onsite installation activities. The description shall include the proposed method for installing the generator armature windings, core and reconditioned exciter into a difficult location, and proposed outage requirements. Provide a statement of any problems or major difficulties anticipated in accomplishing the installation and proposed resolutions.

(ii) The offeror shall provide a plan for removal of the existing generator armature windings, core and exciter which demonstrates an acceptable method of handling and disposal of hazardous materials (if applicable). Provide a statement of any problems or major difficulties anticipated in performing or accomplishing the removal and proposed resolutions.

(8) Design Innovations/Design Methods. This evaluation factor will comprise 5% of the total evaluation weight.

The offeror shall provide a list of innovations and proposed design methods in the design of this specific type of generator armature winding, core and exciter reconditioning process which it proposes to furnish.

(9) Risk. The Offeror’s past performance/experience, proposed manufacturing facilities, proposed installation procedures, and stator core/winding design will be evaluated to determine the degree of risk to the Government in selecting their firm for an award. In evaluating “Risk,” Reclamation will take into consideration elements such as, but not limited to: the estimated amount of Government oversight required to ensure adequate performance and the offeror’s overall credibility when their proposal is viewed as a whole. Offerors demonstrating superior qualifications evidenced by successful on-ime past performance and proven stator/winding design success will be rated more favorably than those lacking these attributes. NOTE: Negative inferences may be drawn by an Offeror’s failure to provide candid and/or complete responses regarding past performance, terminations, claims, and late delivery/performance, etc.

(10) Price. This evaluation factor will comprise 20% of the total evaluation weight.

After applying any additional costs due to the "Evaluation of Equipment Efficiency and Losses" or "Foreign Inspection Service" provisions of the solicitation, the following formula will be used to evaluate price:

$$[20 - \{20 \times (\frac{\text{Proposed Price - Lowest Proposed Price}}{\text{Lowest Proposed Price}})\}]$$

Negative points may be applied to the offerors score due to this formula.

(c) A written notice of award or acceptance of an offer, mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer, shall result in a binding contract without further action by either party. Before the offer's specified expiration time, the Government may accept an offer (or part of an offer), whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award.

(d) Foreign inspection service. For evaluation purposes only, the additional cost to the Government of foreign inspection service in the amount of $15,000 will be added to the total price offered in the schedule for all offers indicating that the articles, materials, and supplies are not domestic source end products or are domestic source end products containing components of foreign origin.

4. Additional Evaluation Provisions Applicable to this Acquisition

(a) WBR 1452.225-82 Notice of Trade Agreements Act Evaluations -- Bureau of Reclamation (Oct 1998)

In accordance with the Agreement on Government Procurement, as amended by the Uruguay Round Agreements Act (Pub. L. 103-465), and other trade agreements, The Trade Agreements Act applies to Bureau of Reclamation acquisitions. Reclamation will evaluate acquisitions at or above the dollar thresholds listed below without regard to the restrictions of the Buy American Act:

(a) Construction ($7,143,000 or $6,909,500 if NAFTA country construction materials are being offered);

(b) Supplies or services:

(1) Mexico ($53,150);
(2) Canada ($186,000);
(3) Israel ($186,000); and
(4) All other designated countries ($186,000).

(b) WBR 1452.246-80 Evaluation of Equipment Efficiency and Losses -- Bureau of Reclamation (Sep 1995) Alternate II (Sep 1995)

For the purpose of evaluating offers under this solicitation, the Government will apply the following factors to evaluate equipment efficiency or loss and to determine which offer provides the best overall value to the Government.

The losses for each generator armature winding will be evaluated on the basis of the warranted kilowatt loss for the armature winding (I^1R), as stated in the "Warranted Characteristics," paragraph in the Supplies or services and prices section of The Schedule at 4,160 volts, rated frequency,.9 power factor, and 7,222 kilovolt-ampere output. The evaluated loss will be determined by multiplying the warranted kilowatt loss by $1,500 and the resulting amount will be added to the contract line item price offered for each armature winding.

5. 52.212-3 Offeror Representations and Certifications -- Commercial Items (May 1999) Alternate II (Oct 1998)

(a) Definitions. As used in this provision:

“Emerging small business” means a small business concern whose size is no greater than 50 percent of the numerical size standard for the standard industrial classification code designated.

“Small business concern” means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and size standards in this solicitation.

“Women-owned small business concern” means a small business concern--

(1) Which is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

“Women-owned business concern” means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Taxpayer Identification Number (TIN) (26 U.S.C. 6109, 31 U.S.C. 7701). *(Not applicable if the offeror is required to provide this information to a central contractor registration database to be eligible for award.)*

(1) All offerors must submit the information required in paragraphs (b)(3) through (b)(5) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the Internal Revenue Service (IRS).

(2) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(3) Taxpayer Identification Number (TIN).

- □ TIN:_____
- □ TIN has been applied for.
- □ TIN is not required because:
  - □ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;
  - □ Offeror is an agency or instrumentality of a foreign government;
  - □ Offeror is an agency or instrumentality of the Federal Government.

(4) Type of organization.

- □ Sole proprietorship;
- □ Partnership;
- □ Corporate entity (not tax-exempt);
- □ Corporate entity (tax-exempt);
- □ Government entity (Federal, State, or local);
- □ Foreign government;
- □ International organization per 26 CFR 1.6049-4;
- □ Other _____

(5) Common parent.

- □ Offeror is not owned or controlled by a common parent;
- □ Name and TIN of common parent:

Name_____
TIN _____

(c) Offerors must complete the following representations when the resulting contract is to be performed inside the United States, its territories or possessions, Puerto Rico, the Trust Territory of the Pacific Islands, or the District of Columbia. *Check all that apply.*

(1) Small business concern. The offeror represents as part of its offer that it ( ) is, ( ) is not a small business concern.

(2) Small disadvantaged business concern. ***[Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.]*** The

offeror represents, for general statistical purposes, that it □ is, □ is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) Women-owned small business concern. ***[Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.]*** The offeror represents that it □ is, □ is not a women-owned small business concern.

Note: Complete paragraphs (c)(4) and (c)(5) only if this solicitation is expected to exceed the simplified acquisition threshold.

(4) Women-owned business concern (other than small business concern). *[**Complete only if the offeror is a woman-owned business concern and did not represent itself as a small business concern in paragraph (c)(1) of this provision.]*** The offeror represents that it □ is, □ is not, a women-owned business concern.

(5) Tie bid priority for labor surplus area concerns. If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price:

_____

(6) Small Business Size for the Small Business Competitiveness Demonstration Program and for the Targeted Industry Categories under the Small Business Competitiveness Demonstration Program. ***[Complete only if the offeror has represented itself to be a small business concern under the size standards for this solicitation.]***

(i) ***(Complete only for solicitations indicated in an addendum as being set-aside for emerging small businesses in one of the four designated industry groups (DIGs).)*** The offeror represents as part of its offer that it ( ) is, ( ) is not an emerging small business.

(ii) ***(Complete only for solicitations indicated in an addendum as being for one of the targeted industry categories (TICs) or four designated industry groups (DIGs).)*** Offeror represents as follows:

(A) Offeror's number of employees for the past 12 months *(check the Employees column if size standard stated in the solicitation is expressed in terms of number of employees)*; or

(B) Offeror's average annual gross revenue for the last 3 fiscal years *(check the Average Annual Gross Number of Revenues column if size standard stated in the solicitation is expressed in terms of annual receipts)*

(Check one of the following):

Number of Employees	Average Annual Gross Revenues
__ 50 or fewer ...	__ $1 million or less
__ 51-100	__ $1,000,001-$2 million
__ 101-250	__ $2,000,001-$3.5 million
__ 251-500	__ $3,500,001-$5 million
__ 501-750	__ $5,000,001-$10 million
__ 751-1,000	__ $10,000,001-$17 million
__ Over 1,000	__ Over $17 million

(7) ***(Complete only if the solicitation contains the clause at FAR 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns, or FAR 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting, and the offeror desires a benefit based on its disadvantaged status.)***

(i) General. The offeror represents that either--

(A) It ( ) is, ( ) is not certified by the Small Business Administration as a small disadvantaged business concern and is listed, on the date of this representation, on the register of small disadvantaged business concerns maintained by the Small Business Administration, and that no material change in disadvantaged ownership and control has occurred since its certification, and, where the concern is owned by one or more individuals claiming disadvantaged status, the net worth of each individual upon whom the certification is based does not exceed $750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); or

(B) It ( ) has, ( ) has not submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.

(ii) Joint Ventures under the Price Evaluation Adjustment for Small Disadvantaged Business Concerns. The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements in 13 CFR 124.1002(f) and that the representation in paragraph (c)(7)(i) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. The offeror shall enter the name of the small disadvantaged business concern that is

participating in the joint venture:
_____.]

(iii) Address. The offeror represents that its address [ ] is, [ ] is not in a region for which a small disadvantaged business procurement mechanism is authorized and its address has not changed since its certification as a small disadvantaged business concern or submission of its application for certification. The list of authorized small disadvantaged business procurement mechanisms and regions is posted at http://www.arnet.gov/References/sdbadjustments.htm. The offeror shall use the list in effect on the date of this solicitation. "Address," as used in this provision, means the address of the offeror as listed on the Small Business Administration's register of small disadvantaged business concerns or the address on the completed application that the concern has submitted to the Small Business Administration or a Private Certifier in accordance with 13 CFR part 124, subpart B. For joint ventures, "address" refers to the address of the small disadvantaged business concern that is participating in the joint venture.

(d) Representations required to implement provisions of Executive Order 11246--

(1) Previous Contracts and Compliance. The offeror represents that--

(i) It [ ] has, [ ] has not, participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation, the clause originally contained in Section 310 of Executive Order 10925, or the clause contained in Section 201 of Executive Order 11114; and

(ii) It [ ] has, [ ] has not, filed all required compliance reports.

(2) Affirmative Action Compliance. The offeror represents that--

(i) It ( ) has developed and has on file, ( ) has not developed and does not have on file, at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 CFR parts 60-1 and 60-2), or

(ii) It ( ) has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(e) Certification Regarding Payments to Influence Federal Transactions (31 U.S.C. 1352). ***(Applies only if the contract is expected to exceed $100,000.)*** By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract.

(f) Buy American Act--Trade Agreements--Balance of Payments Program Certificate. ***(Applies only if FAR clause 52.225-9, Buy American Act--Trade Agreement--Balance of Payments Program, is included in this solicitation.)***

(1) The offeror hereby certifies that each end product, except those listed in paragraph (f)(2) of this provision, is a domestic end product (as defined in the clause entitled "Buy American Act--Trade Agreements Balance of Payments Program") and that components of unknown origin have been considered to have been mined, produced, or manufactured outside the United States, a designated country, a North American Free Trade Agreement (NAFTA) country, or a Caribbean Basin country, as defined in section 25.401 of the Federal Acquisition Regulation.

(2) Excluded End Products:

LINE ITEM NO.	COUNTRY OF ORIGIN
_____	_____
_____	_____

(List as necessary)

(3) Offers will be evaluated by giving certain preferences to domestic end products, designated country end products, NAFTA country end products, and Caribbean Basin country end products over other end products. In order to obtain these preferences in the evaluation of each excluded end product listed in paragraph (f)(2) of this provision, offerors must identify and certify below those excluded end products that are designated or NAFTA country end products, or Caribbean Basin country end products. Products that are not identified and certified below will not be deemed designated country end products, NAFTA country end products, or Caribbean Basin country end products. Offerors must certify by inserting the applicable line item numbers in the following:

(i) The offeror certifies that the following supplies qualify as "designated or NAFTA country end products" as those terms are defined in the clause entitled "Buy American Act--Trade Agreements--Balance of Payments Program:"

_____

(Insert line item numbers)

(ii) The offeror certifies that the following supplies qualify as "Caribbean Basin country end products" as that term is defined in the clause entitled "Buy American Act--Trade Agreements--Balance of Payments Program":

_____

(Insert line item numbers)

(4) Offers will be evaluated in accordance with FAR Part 25.

(g) (1) Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Program. ***(Applies only if FAR clause 52.225-21, Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Program, is included in this solicitation.)***

(i) The offeror certifies that each end product being offered, except those listed in paragraph (g)(1)(ii) of this provision, is a domestic end product (as defined in the clause entitled “Buy American Act--North American Free Trade Agreement

Implementation Act--Balance of Payments Program," and that components of unknown origin have been considered to have been mined, produced, or manufactured outside the United States.

(ii) Excluded End Products:

LINE ITEM NO.	COUNTRY OF ORIGIN
_____	_____
_____	_____

(List as necessary)

(iii) Offers will be evaluated by giving certain preferences to domestic end products or NAFTA country end products over other end products. In order to obtain these preferences in the evaluation of each excluded end product listed in paragraph (g)(1)(ii) of this provision, offerors must identify and certify below those excluded end products that are NAFTA country end products. Products that are not identified and certified below will not be deemed NAFTA country end products. The offeror certifies that the following supplies qualify as "NAFTA country end products" as that term is defined in the clause entitled "Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Program":

_____
_____
_____
(Insert line item numbers)

(iv) Offers will be evaluated in accordance with Part 25 of the Federal Acquisition Regulation. In addition, if this solicitation is for supplies for use outside the United States, an evaluation factor of 50 percent will be applied to offers of end products that are not domestic or NAFTA country end products.

(2) Alternate I. If Alternate I to the clause at 52.225-21 is included in this solicitation, substitute the following paragraph (g)(1)(iii) for paragraph (g)(1)(iii) of this provision:

(g)(1)(iii) Offers will be evaluated by giving certain preferences to domestic end products or Canadian end products over other end products. In order to obtain these preferences in the evaluation of each excluded end product listed in paragraph (b) of this provision, offerors must identify and certify below those excluded end products that are Canadian end products. Products that are not identified and certified below will not be deemed Canadian end products. The offeror certifies that the following supplies qualify as "Canadian end products" as that term is defined in the clause entitled "Buy American Act--North American Free Trade Agreement Implementation Act--Balance of Payments Program":

_____
(Insert line item numbers)

(h) Certification Regarding Debarment, Suspension or Ineligibility for Award (Executive Order 12549). The offeror certifies, to the best of its knowledge and belief, that--

(1) The offeror and/or any of its principals ( ) are, ( ) are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency, and

(2) ( ) Have, ( ) have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax invasion, or receiving stolen property; and) are,) are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses.

Attachment No. 1
Drawings

Drawings are not available online.
Please contact us if you would like to order the hard copy set.

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